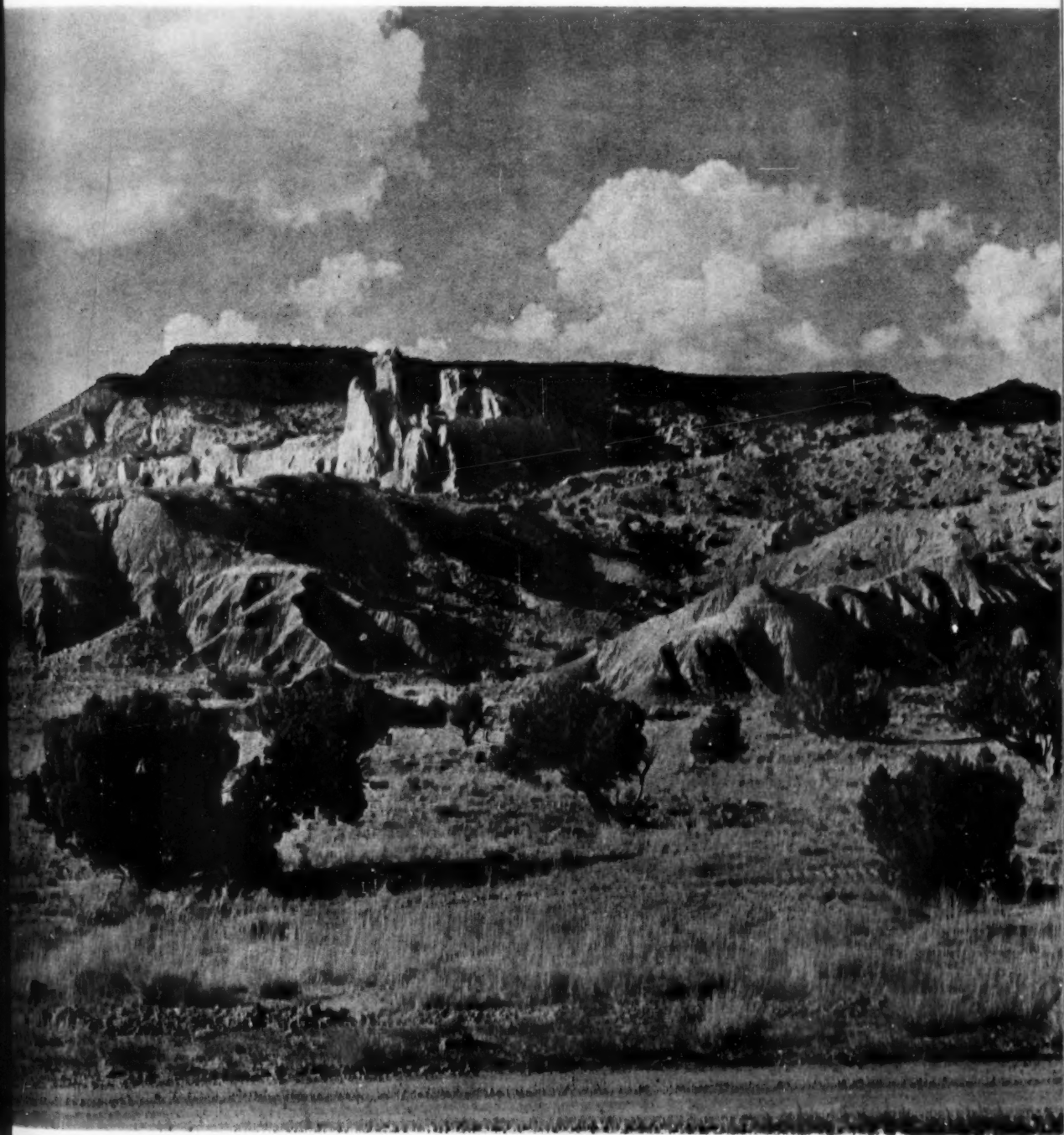


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The Magazine of Forests, Soil, Water, Wildlife, and Outdoor Recreation

MARCH 1960

50 CENTS



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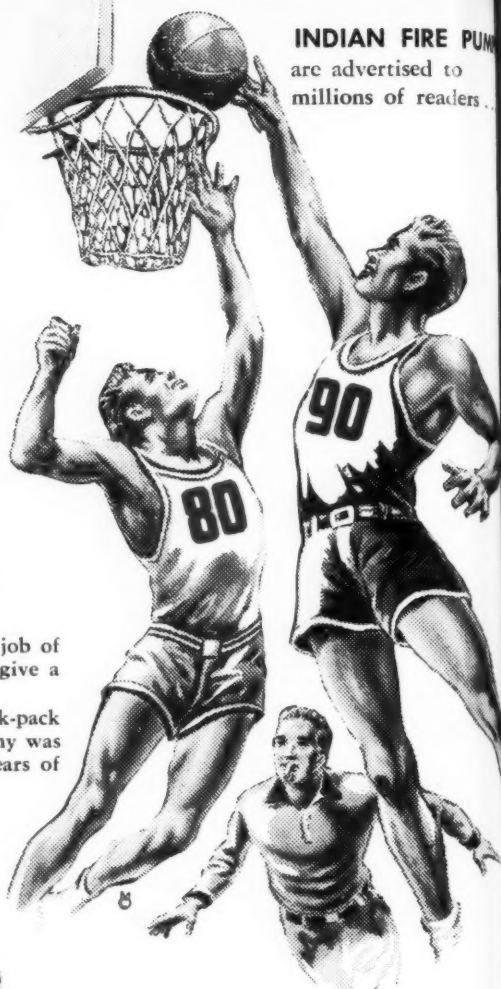
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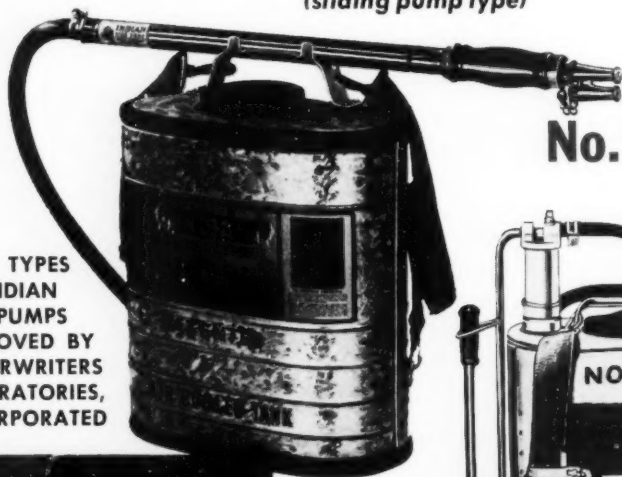


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The American Forestry Association, publishers of American Forests, is a national organization—independent and non-political in character—for the advancement of intelligent management and use of forests and related resources of soil, water, wildlife and outdoor recreation. Its purpose is to create an enlightened public appreciation of these resources and the part they play in the social and economic life of the nation. Created in 1875, it is the oldest national forest conservation organization in America.

James B. Craig
EDITOR

Betty Kindleberger
ASSISTANT EDITOR

James J. Fisher
ART DIRECTOR

Vol. 66, No. 3, March, 1960

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THE COVER

New Mexico countryside surrounding the Ghost Ranch Museum. (See article "Beavers, Bones, and Beauty" on page 20.) Photograph by Hiram L. Parent.

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Forest Forum

Wind River Pioneers

EDITOR:

I have just finished reading Michael Frome's article "Let's Go Trail Riding" in the January, 1960 issue, in which he so graphically describes the Trail Rider pack trip through the beautiful Wind River country. It is of particular interest to me since my father, W. B. Greeley, and I were members of the first group of Trail Riders to make this particular trip in 1935, shortly after the trail was opened by the CCC boys. Mr. Frome recalls this first trip in his story about ascending to Crow's Nest Lookout Point to sign the register.

Many times since then I have enjoyed going over the photographs taken at that time, recalling various incidents that happened. Your files no doubt record that the 1935 trip was outfitted by Stan Decker of the GP Bar Ranch, who did a most thorough and efficient job. I recall that there were 30 riders plus eight in help and a complement of eighty horses. During one of the day layovers my father and I, along with a Mr. Barrett, who at that time operated a photographic shop, at Jackson, I believe, and was the official photographer for the trip, broke away from the group and climbed Gannett Peak, most of the way by horse and the rest on foot. What a thrilling sight from the top! Barrett took a panoramic shot, which is one of the pictures in my collection that I enjoy the most.

I was particularly interested in the photograph of Square Top included with the article, and enclose a 35mm color shot I took of it from the GP Bar Ranch when we stopped there in 1952. At that time my wife and two young daughters were taking a trip with me by automobile through some of our beautiful national parks, and we made a point of detouring northward from Rock Springs to the ranch just to see that particular part of Wyoming. The picture is a very poor copy of my original, being quite streaked, but it does seem to have kept its coloring well. I thought that you might be interested in seeing it.

It seems most timely and fitting that the Wind River story should be included in AMERICAN FORESTS at this time, since 1960 will be the start of its second quarter-century. Except for our overnight stay at GP Bar in 1952 I have not been back to this section of the country with its beautiful streams, lakes, and forests and its overpowering peaks. I have never forgotten it and hope that some day in the not-too-distant future I may be able to again join the Trail Riders.

Briard N. Greeley
55 Perth Avenue
New Rochelle, New York

(Your name and that of your father are still in place on the Crow's Nest—Editor).

Lynch Story Praised

EDITOR:

Just a line to say how much I have enjoyed reading the Lynch article in the Jan-

uary magazine. It is the first thoroughly factual statement I have seen and should be widely distributed. I am saying this on the basis of some knowledge on the subject accumulated during the past fifty years.

Royal S. Kellogg
Palmetto, Florida

Lynch Story Criticized

EDITOR:

Having spent a good deal of time in Alaska during the past year, I feel qualified to take exception to a number of statements made by R. G. Lynch in his article titled "Alaska." (AMERICAN FORESTS, January 1960)

Since Mr. Lynch's Alaskan trip was made in 1958, I do not take exception to his statement that there was not, at that time, a creosoting plant in Alaska. It should be pointed out, however, that Koppers Company will start production in mid-1960 at

Progress in Science

EDITOR:

You will recall that Ronald Lanner, in his article some months ago, in AMERICAN FORESTS—"The Forester vs. The Comrade," mentioned the criticism under which Academician V. N. Sukachev had fallen because of the critical articles which his journal had carried on Lysenko's theories on genetics.

Mr. Lanner closed his article with reference to the fact that Mr. Sukachev's presence or absence at the Fifth World Forestry Congress in Seattle, this year, might throw some light on the current state of Soviet biological policy. I cannot say as to this, but I think you and readers of AMERICAN FORESTS might be interested in the fact that a dispatch from the Ministry of Foreign Affairs of the Soviet Socialist Republic, of October 6, 1959, to the American Embassy in Moscow, stated that a committee for preparation of U.S.S.R. participation in the World Forestry Congress had been formed in the Academy of Sciences of the U.S.S.R., under the chairmanship of Academician Sukachev. The Organizing Committee of the Congress was authorized, in this dispatch, to direct all information concerning preparations for this Congress to Mr. Sukachev.

We have not heard further from this Committee and have not yet been informed as to the make-up of the U.S.S.R. delegation, if one is to be sent to the Congress, but, at least, our Congress contacts are to be under Mr. Sukachev's direction.

I. T. Haig
Executive Secretary
Fifth World Forestry Congress
Department of State,
Washington 25, D. C.

a wood preserving plant it now is building at Whittier.

Mr. Lynch's blanket statement that "forests are low-grade and depend on the pulp industry," and his assertion that there is no millwork plant in Alaska must be challenged.

Columbia Lumber Company has large operations and has done millwork for many years. It operates mills in Whittier, Sitka, and Juneau and has lumber yards in many cities and towns.

My surveys, made in conjunction with the Forest Service, show that there are many square miles of high-grade timberlands. Spruce and hemlock are available in vast quantities. They are clear, dense and close-grained—much superior in quality to the same species on the mainland. Many thousands of board feet are sent to western states via ocean-going barges for use in piano and furniture manufacture. It also will be recalled that in the early days of aviation, when airplanes contained much wood, Sitka spruce was virtually the only wood that met specifications for this exacting use.

Many aspects of Mr. Lynch's article are realistic, even though pessimistic. I am sure that if he could have been assigned to write an article on the future of California in the days of its early statehood, he would have been similarly pessimistic.

Donald A. Mitchell
Western District Manager
Wood Preserving Division
Koppers Company, Inc.
Los Angeles, Calif.

S.O.S. for Bennett

EDITOR:

Canada badly needs the advice of Hugh Bennett.

I just purchased a quarter-section of land in a good hay country; I realized six tons of hay from 60-some odd acres. The reason—lack of fertilizer, no effort to retain the moisture.

I believe our city could erect a plant for fertilizers from the sewage disposal. The other night in the paper they mentioned a system of turning the sewage into an ash. Would it not be more profitable to make fertilizer?

Is there any way I could purchase literature for the farmers? In other words, Alberta and Saskatchewan need more advice on the subject.

I would appreciate any help you can give.

D. Waters
3132-39 Street, SW
Calgary, Alberta

The Oregon Dunes

EDITOR:

I have read with great interest the article on the proposed Oregon dunes seashore recreation area appearing in the January issue of AMERICAN FORESTS. My good friend, William Morse, has done an excellent job

of describing the area and delineating the problems which have resulted from introduction of legislation to create this national seashore. Mr. Morse's article was written several months ago, and recent occurrences have cast a somewhat different light on the situation. It now appears highly likely that the "controversy" has reached a compromise stage, and the opposing interests may well rally around a bill recently introduced by Senator Richard L. Neuberger at the suggestion of Governor Mark Hatfield and Oregon's Committee on Natural Resources.

The new proposal, S. 2898, contains various provisions felt necessary by resource administrators of Oregon, and local National Park Service officials have indicated that the new legislation offers no "insurmountable" difficulties.

The caption preceding Mr. Morse's article states that Governor Mark Hatfield has opposed the national seashore. Governor Hatfield has at no time been hostile to the idea, but has objected that previous legislation did not properly recognize the interests of Oregon and its people. The new bill, S. 2898, has the complete backing of the state administration. Further, it appears acceptable to most of the former opponents of the seashore.

In discussing Oregon dunes and other areas proposed for designation as national seashores, it seems important to understand that this is a relatively new type development within the national park system. Much opposition in the past has been based upon the impression that these recreation areas will be managed and developed in exactly the same manner as our great national parks, such as Yosemite, Yellowstone, etc. There has been considerable question over the necessity for what some refer to as "overly restrictive" regulations.

It is clear that a totally new concept must prevail if some of America's shorelines are to be preserved for use of all the people. The concern in this instance should not be solely the preservation of great scenic or historic areas, although this is of great importance. These new areas, adjacent to our inland lakes, rivers, and oceans can lend themselves to recreational use by the millions of Americans, now and in the future, but they should be completely available for use.

Further, the practicality of co-operating with state and local recreation and resource management agencies should not be overlooked. This point is of particular importance in the so-called "public land" states of western America. There is need for the adoption of standards which may vary from place to place, dependent to a large extent upon local conditions.

It may be that some of these new standards will be more acceptable to the National Park Service itself than to its many supporters throughout the country. However, it is the hope of many of us most concerned that the spirit of compromise and effective co-operation which now has entered the Oregon dunes discussion may result in a new awakening to the needs of the American public, and that 1960 will see Congress take positive action.

The present Oregon dunes proposal, as embodied in S. 2898, if promptly acted upon could be the signal which will set in motion this vital nation-wide program.

Dan P. Allen
Executive Secretary
Committee on Natural Resources
Salem, Oregon
(Turn to page 61)



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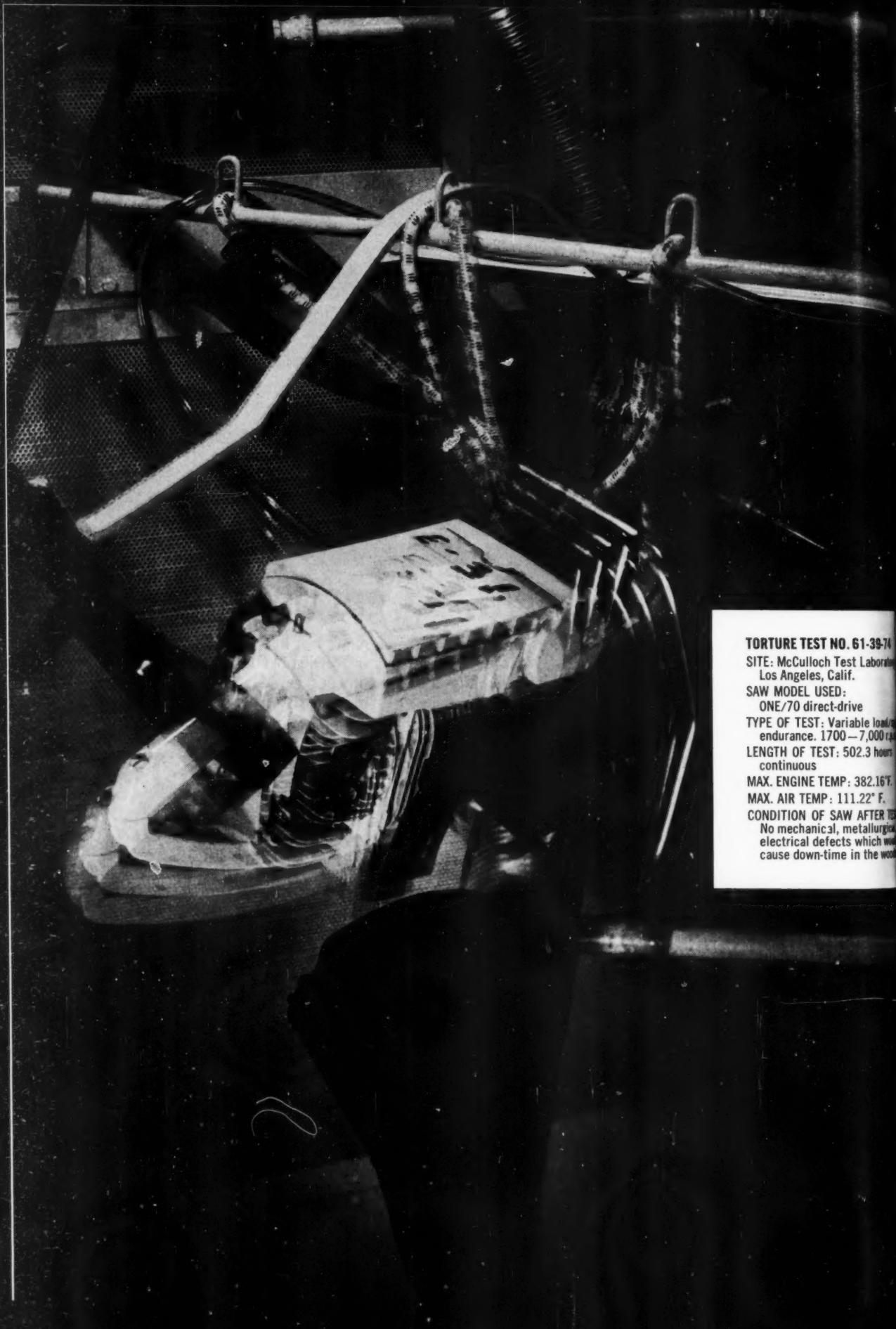
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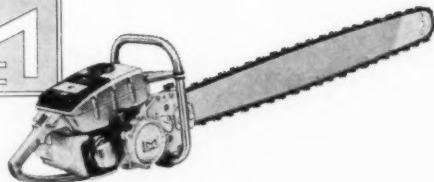
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MINNESOTA COMPLETED; NORTH CAROLINA STARTED

DURING January, 1960 The American Forestry Association completed review of its Minnesota landownership study with a public hearing in St. Paul on January 15-16 and began a new project in North Carolina with a similar meeting at Raleigh on January 26.

In Minnesota, specters of the past continue to cast long shadows. Basically it is a matter of the land being taxed beyond its capacity to pay. This fundamental problem has plagued three generations of Minnesotans and continues to defy an equitable solution. It spawned the "cut-out get-out" philosophy of early timber barons, caused the forfeiture of millions of acres of denuded land for non-payment of taxes, prompted successive legislatures to devise make-shift schemes to return forfeited land to the tax rolls, channelled much of the poorer land into public ownership, and resulted in a scrambled maze of intermingled ownership that hinders administration by individual owners.

These and other aspects of the problem were presented by Dr. Samuel T. Dana in his report "Minnesota Lands—Ownership, Use, and Management of Forest and Related Areas." About 60 citizens were present. The discussion became so interesting that the chairman of the State Legislative Interim Committee, Senator Leo J. Lauerman, asked if his group might meet in joint session with AFA's Advisory Committee.

The Interim Committee promptly focused its attention upon the inability of the state to provide a sound title for tax-deeded lands, the possibilities for more efficient management through consolidation of public ownerships by exchange, the legal limitation which prevents the exchange of certain classes of state lands for those which it also holds

in trust for the counties. John H. Allison, one of Dr. Dana's assistants, has been retained as counsel for the Interim Committee.

During the open hearing, some critics said AFA's Minnesota report favored the U.S. Forest Service. Others suggested it give more credit to the current accomplishments of forest industry and make less reference to past sins. Some county land commissioners questioned the advisability of any relinquishment of public land to private parties who might "scalp" it as in the past. Others said the "cut-out get-out" days are over. Better economic incentives will ensure good management by industry. However, there is nothing, they said, to prevent a farmer or "gyppo" from clear cutting private land.

Representative Cliff Grabe of

Wadena County said, "Our troubles would be over if we had some management control over the individual. We need something like the game laws to regulate the timber crop."

Someone else pointed out the state now has a Cutting Practice Board, but its recommendations are unenforceable and consequently of little value. This led to a discussion of zoning to control land clearing. Several counties have such ordinances and praised them highly.

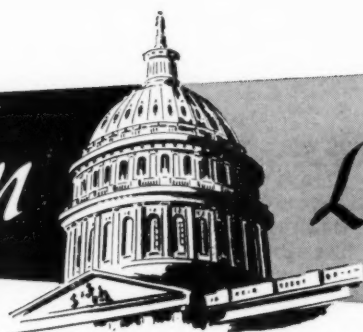
Dr. Dana's suggestion that forest industry be permitted to increase its present ownership of 78,000 acres (about three per cent of the state's forested area) by approximately 300,000 acres, met determined opposition. Industry would like to assure itself of minimum supplies. County

(Turn to page 43)

Standing, left: F. H. Claridge, N. C. State Forester, G. E. Jackson, president of the N. C. Forestry Association, Kenneth B. Pomeroy, Chief Forester of AFA, Seated: J. Edgar Kirk, chairman of the AFA Landownership Advisory Committee



Washington



Lookout

By ALBERT G. HALL

FORESTRY IN THE FEDERAL BUDGET FOR THE

fiscal year ending June 30, 1961 (see tabulation, page 64) includes major increases for the U. S. Forest Service program. Part of the requested increase, \$530,000, is caused by the requirements of the new health benefit insurance for federal employees. Of the total increase of \$11,087,500 for the Forest Service, \$4,657,000 is for expanded recreation-public use of the national forests, bringing the total for this activity to \$14,830,000, next in fiscal importance to the financing of timber sales. Purpose of the increase is to implement "Operation Outdoors" to help the national forests catch up with increasing demands for recreational facilities.

OTHER INCREASES IN THE FOREST SERVICE RE-

quest include \$960,000 additional for timber sales administration, \$1,786,600 for research, \$1,000,000 for land acquisition within the Superior National Forest, and \$372,000 for national forest protection.

STATE AND PRIVATE FORESTRY CO-OPERATION

programs are budgeted at the same program figures as in the current fiscal year; the \$7,000 increase shown in the tabulation is the estimated cost of the health insurance program.

THE HOUSE COMMITTEE ON APPROPRIATIONS HAS

approved the total Forest Service request, except for the item for acquisition of lands for the Superior National Forest. This was reduced by the committee from \$1,000,000 to \$750,000. While approving the total request for national forest protection and management, the House committee shuffled the figures and reported as follows: "The amount allowed includes an increase of \$805,000 to accelerate the rate of national forest timber sales and timber cutting; an increase

of \$350,000 for fire and administrative structural improvements; a decrease of \$146,100 due to transfer of certain leasing costs to the General Services Administration; and \$432,000 for employee health benefit costs. In addition the committee has reprogrammed \$1,000,000 of the requested budget increase of \$4,657,000 for recreation to strengthen other urgent requirements on the national forests. Although the committee appreciates the need for additional recreation benefits in the national forests, it believes it is not justified in making provision for this need at the expense of other requirements." So, comparing the House committee allowance with the budget requests shown on page 64, the House figures are shown in parentheses: reforestation, \$3,465,000 (\$3,865,000); recreation \$14,830,000 (\$13,830,000); range revegetation, \$1,600,000 (\$1,695,000); range improvements, \$1,965,000 (\$2,060,000); soil and water management \$1,615,000 (\$1,853,000); Forest fire protection \$14,345,000 (\$14,517,000); acquisition, Superior National Forest, \$1,000,000 (\$750,000).

IN ADDITION TO DIRECTLY APPROPRIATED FUNDS,

the Forest Service will also share in funds appropriated to other agencies for related programs on which Forest Service assistance is given. Some of these are: watershed protection, flood prevention, and Great Plains programs administered by the Soil Conservation Service, the Agricultural Conservation Program, and the Conservation Reserve of the Soil Bank Program.

THE INTERIOR DEPARTMENT'S REQUESTS FOR FOR-

estry and related activities were unchanged by the House committee. They are at about the same rate as those of the current year.

(Continued on next page)

IN ALL PROBABILITY, CONGRESS WILL INCREASE

forestry expenditures. Despite the action by the House committee, indications are that some members of the Senate believe that the President's balanced budget does not adequately provide for advancement of Secretary Benson's "Program for the National Forests." This plan for both long-range and short-range development of the national forests was presented to Congress last year, and was heartily endorsed by the congressional committees concerned. Disappointment with the proposed funding of the program in fiscal year 1961 has been expressed by a large number of senators who believe that the budget request should have been for an increase of \$33 million over last year, rather than the more modest \$11 million.

THE RESOURCES AND CONSERVATION ACT OF 1960,

a bill sponsored by Senator Murray of Montana and 30 others, has been the subject of hearings before the Senate Committee on Interior and Insular Affairs, of which Senator Murray is chairman. Principal witnesses so far have been state governors who have been in support of the proposed declaration of natural resources policy and the establishment of a Council of Resources and Conservation Advisers in the office of the President. Some opposition has been expressed, and it is indicated that there will be even more opposition. Both the Department of the Interior and the Department of Agriculture have objected to most of the features of the bill. It is predicted, however, that the bill will be favorably reported by the Senate committee (eight of the sponsors are members of the committee).

A SLIGHTLY REVISED WILDERNESS BILL has been

prepared as a committee print or draft for consideration of the Senate Committee on Interior and Insular Affairs. This draft, known as Committee Print No. 3 of S. 1123, is now being considered by the committee. Principal change from earlier drafts is provision for Congress to act for or against a wilderness proposal or alteration by concurrent resolution. The earlier bills provided for such action by joint resolution which is subject to presidential veto. It is now believed that

the current draft, which overcomes many of the criticisms of the wilderness proposal advanced by Senator O'Mahoney of Wyoming, may be adopted by the committee and by the Senate. There is still considerable doubt that a wilderness bill of any kind can succeed in the House during this Congress.

AN ACT TO ESTABLISH MULTIPLE USE as a concept of management for the national

forests has been proposed by the Department of Agriculture. The proposal as sent to Congress by Acting Secretary of Agriculture E. L. Peterson calls for the national forests to be managed for "outdoor recreation, range, timber, watershed, and wildlife and fish purposes" and directs the secretary "to develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of the several products and services available therefrom."

SALES OF KLAMATH INDIAN TIMBER LANDS to

private enterprise are disappointingly small. Under the provisions of the act terminating federal jurisdiction over the Klamath Reservation, four forest units had been advertised for competitive sale, with prospective purchasers having to provide long-range plans and agreement to federally-supervised sustained yield management. Of the units offered for sale last year, only one is in the process of sale. Crown Zellerbach Corporation submitted a management plan which met with Forest Service approval for this area and placed a bid slightly in excess of the appraised value. The bid on this area is, therefore, closed, and it will be sold. On three other units, the story briefly is this: one company submitted a management plan, but asked for an extension of 90 days beyond the bid deadline in which to submit a bid offer on two units; a fourth unit stimulated neither a management plan nor a bid. Under the termination act, lands not purchased by private companies or persons are to be purchased by the federal government and incorporated into the national forest system. It has been indicated, however, that if sufficient interest is shown, the three areas already advertised may be re-offered for private purchase.

(Turn to page 64)

Ovid Butler

Most organizations with long histories have produced men who have been rocks of strength through crucial periods and who have been looked to when great deeds needed doing or great sacrifices had to be made. Such a man was Ovid Butler, executive director and editor of The American Forestry Association for more than a quarter century from 1922 to 1948, who died at 79 on February 20 in Washington, D. C. Not only did Mr. Butler safely lead the association through a major depression and a great world war, but he also pioneered a series of nationally-prominent conservation campaigns that firmly established him in the foremost rank of public forestry educators. As colleagues have rightfully said, in the field of public forestry education, Mr. Butler stood alone.

For men and women on the present association staff who were largely trained by Mr. Butler, the task of being objective about "the Boss" presents difficulties. Fred E. Hornaday, executive vice president, who came under Mr. Butler's wing 31 years ago almost fresh out of college, recalls that above all things, Mr. Butler was "a sound man—a stickler for fiscal responsibility both in and outside of the government." And while Mr. Butler's conservation writings and editorials were widely recognized, veteran staff members say they were not his best. His best, they aver, were the eloquent letters he wrote to leading citizens in the depths of the depression pleading for funds to keep the lamp of conservation lit. It was these letters that kept the association afloat at a time when many conservation groups fell by the wayside. It was these letters that helped give the association the stability it enjoys today.

Some of Mr. Butler's major accomplishments are enumerated in the article on page 27 of this issue, and we will not go into them here. The writer, who arrived on the scene in the autumn of Mr. Butler's career, remembers him mostly as a teacher and editor. As a youngster fresh out of the hills of western Maryland, he recalls how Mr. Butler would mount the stairs to the sweltering fourth floor on the hottest summer days—jacket and tie firmly in place—to talk for half an hour or so on the difference between the national forests and parks, the danger of permitting vested rights on public lands, the importance of water conservation, and dozens of similar subjects. It wasn't until months later that it dawned on the fledgling staff member that Mr. Butler was teaching him a very efficient conservation catechism, most of which sticks in his memory to this very day.

As an editor, Mr. Butler was in a class by himself in conservation annals. Most of the leading conservation writers of his day wrote for Mr. Butler; one thinks immediately of Erle Kauffman, polished and meticulous, who succeeded Mr. Butler as editor; the able Tom Gill, one of the best, who also served as an editor; Stewart Holbrook, whom Mr. Butler encouraged; Aldo Leopold, Albert G. Hall, Henry Kernan, Archibald Rutledge, Arthur Carhart, Donald Culross Peattie,

Dick Neuberger, John Preston, Charles Elliott, H. H. Chapman, Major John Guthrie, and many others.

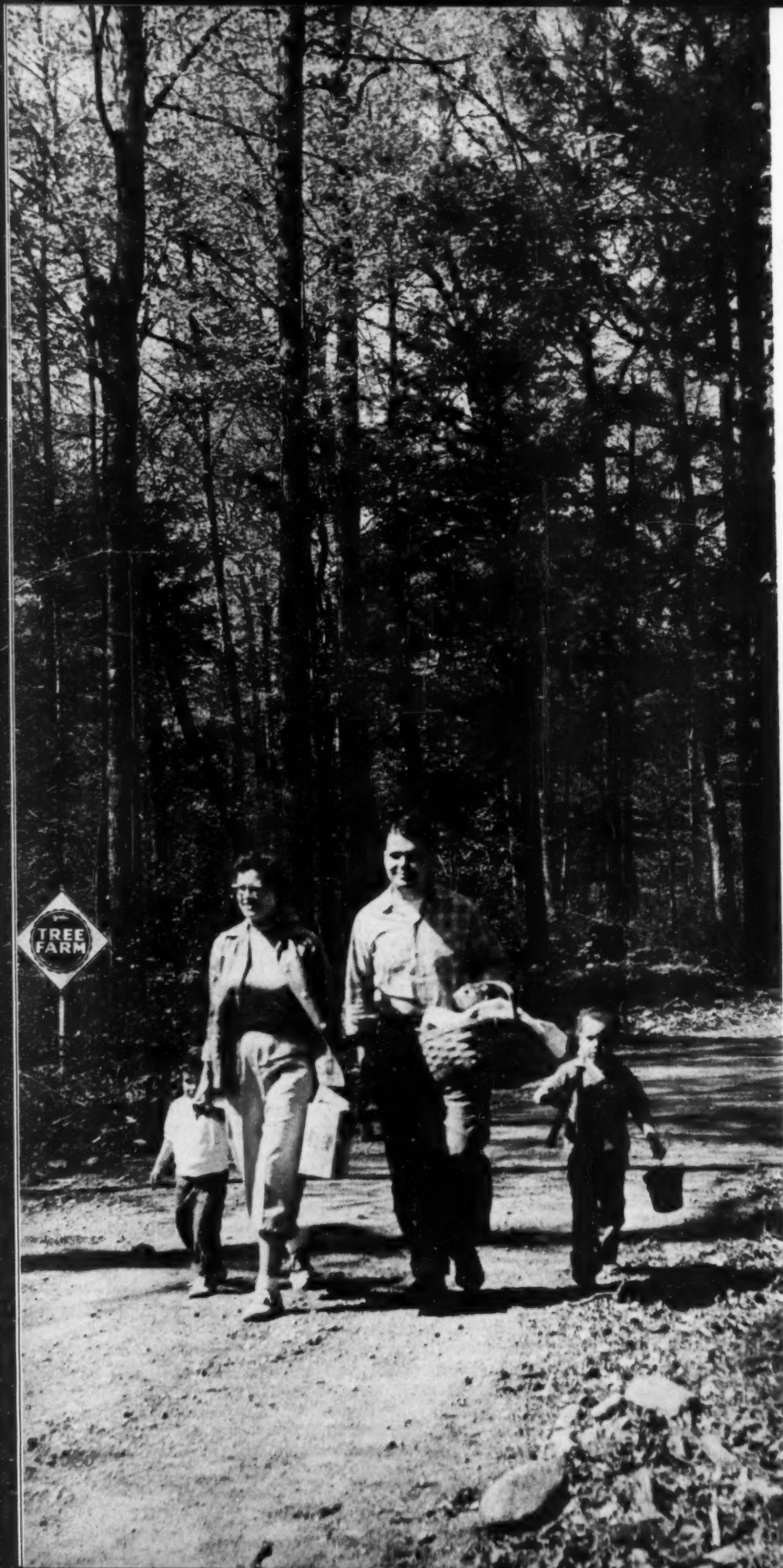
Most of these men could write as well or even better than Mr. Butler. But none surpassed him in his ability to marshal facts, present them effectively—even explosively—and then get something done about them. For Ovid Butler, to a high degree, had the capacity for moral indignation, and that, in substance, was the source of his strength. In his time he tilted lances with the best of them and generally gave as good as he got. The late Mr. Ickes developed a wholesome respect for Mr. Butler when the former endeavored to move the national forests to the Interior Department. The same was true of western congressmen who took issue with Mr. Butler's stand against a vested rights grazing bill. These legislators hauled him up before a special investigating committee and tried to discredit Mr. Butler. They failed.

As we write, we have before us Mr. Butler's most successful journalistic effort. That is his classic, "The Oregon Checkmate," in which he uncovered and presented the gruesome facts that led to placing the extensive O. and C. timberlands under sound management. "The O. and C. pot calls for scouring," Mr. Butler wrote, and he scoured it. As he himself wrote, here was a tale "flavored with stupid legislation, political chicanery, supine administration, crucified homesteaders, and forest devastation as ruthless as that of the timber pirates of old. . . ." We will always contend that this crusading article alone is the equal of, if not better than, anything Lincoln Steffens or Ida Tarbell wrote in their heydays for the militant *McClure's Magazine*.

Mr. Butler was a great forester. He was one of the best fire fighters of them all, and his "Dixie Crusade" will be remembered. But he was even more than that. His contemporary, Miss Harlean James, in comparing him to nine other outstanding foresters, once told us, "They were great foresters, but Mr. Butler is a great conservationist." The distinction eluded us at the time. But the truth is that Ovid Butler was intensely interested in *everything* outdoors. Wildlife intrigued him. He studied soil problems. He was a keen student of water problems and once told us that the board of directors was inclined to be short-sighted on the subject. He had a lifelong interest in recreation and in 1928, in collaboration with Robert Sterling Yard, of the National Parks Association, authored a recreation policy for the first Coolidge recreation study, which still stands as a model of foresight and common sense. He was, in short, an ecologist long before most people knew what the word meant.

Yes, Ovid Butler was a sound man. He was also an extremely broad-gauged man and we venture to predict that his life will prove to be a jewel for study by foresters of tomorrow. In a word, he was ahead of his time. One of the pioneers in conservation has crossed over the river into the eternal shade of the trees.

(J.B.C.)



MONEY CAN GROW ON TREES

By PETER FARB

The Don Schultz family of Green Bay, Wisconsin heads for a picnic on lumber company-owned tree farm

All photographs by American Forest Products Industries.

SOME 17 years ago, John Shyer, an electrician by trade, bought a run-down farm in Decatur, Illinois, as a homestead and a place to grow in his spare time. The gullies on his 60 acres were deep enough to bury an automobile; topsoil and hillsides were wasted away; wildlife had fled. Silt rolling off these acres and many others around it was quickly smothering Lake Decatur, a water-supply reservoir built at great cost. Mud had already decreased the lake's storage capacity by upwards of a fourth.

The city sent a conservationist to convince the newcomer that the crop he ought to grow was trees—not only to hold back the soil from the reservoir, but also possibly to furnish an income in a few years. So, in off hours, Shyer, his wife and daughter put tens of thousands of evergreens into the denuded land. They cared for their tree crop—pruning, weeding, thinning—just as if they were raising corn. They never harvested more wood than the tree farm produced in a year's growth.

Within a decade, Shyer was harvesting as many as 3500 Christmas trees a year. Trees left in the ground received more space and sunlight, and they put on new growth vigorously. This year, Shyer will harvest an additional income from pulpwood. His profit on these formerly eroded acres equals that of



In Illinois John Shyer shows his family Christmas tree stump with some branches remaining. One of the branches will turn up and produce another Christmas tree

neighboring farmers who till the best acres for corn or soybeans. And growth ring by growth ring, his trees put on new profits every year—promising steady retirement income as the forest matures. Meanwhile, the clothed acres now soak up the rain and no longer add silt to Lake Decatur.

Forest "Classroom"

So successful has Shyer been in rebuilding the land that many educators in Illinois and nearby states regard it as an "outdoor classroom." Last year, 30,000 school youngsters visited his tree farm for a practical lesson in conservation. His enthusiasm has become contagious and

neighbors, too, have learned that money grows on trees. Many of them have begun planting programs of their own, and they find for themselves that trees do pay—in income and civic beauty and a deep satisfaction of rebuilding a piece of land.

Tree farming in recent years has become the mightiest conservation venture since Johnny Appleseed took to the woods. About 4.5 million Americans with small woodlots own upwards of 60 per cent of the nation's commercial forest—three times the acreage of commercial forest in the entire national forests. Many of these woodlot owners hold jobs; others are retired. With them, trees are

just a sideline. But America's hunger for wood—better than 5000 products are made from it—makes it a profitable one. Each year, the United States consumes the equivalent of a solid block of wood, 48 by 48 feet, stretching from New York to Kansas City. Within just 40 years, according to the U. S. Forest Service, that block will need to stretch nearly to Salt Lake City. Half of the increased supply must come from the backyard woodlots.

Growing trees used to be a you-plant - and - your - grandson - harvests venture. No longer. Even some five-year-old tree farms are today producing a modest income. And you don't have to wait a century to



As tree farmers Mr. and Mrs. John Shyer of Decatur, Illinois must protect trees from grazing, fire, insects, and disease.

grow saw-logs; new methods of using smaller trees, as well as an improved process of gluing wood together, have lessened the time necessary for producing this high-priced timber. Weed trees formerly left in the woods are finding value; once-worthless aspen, for example, is now providing almost half of the pulpwood in the Lake States. More of each tree is used: nearly 75 per cent today, as opposed to only a third a few decades ago. Bark can now be converted into insulation and fertilizer, compressed sawdust into fuel, stumps into turpentine.

Tree Farming in Europe

Tree farming has been practiced for centuries in Europe, notably in

Germany and Scandinavia. There, some families have been cropping trees on a paying basis for generations. Finland, for example, has well over 300 forestry associations, groups of small landowners who work together, even employing their own foresters. In one German county, Uelzen—about 60 miles from Hanover—some 2000 tree farmers from 190 communities recently pooled their small plots and hired 11 foresters to manage them. Result: timber production has increased and the individual farmers get higher cash returns than if they tried to plant and harvest on their own.

When Edward Crafts of South Deerfield, Massachusetts, saw some of these magnificent German forests

at the end of World War II, he resolved that he would build a forest of his own. In 1949, he started buying cut-over land whenever the family budget showed a surplus. One of his first parcels was 56 acres at a cost of \$325. Even at that price, neighbors were convinced that he had paid too much. But he has continued to add to his forest-holdings and he now has 205 acres.

Crafts weeded out diseased and crowded trees and replaced them with thrifty pine plantings. In this first improvement process, wood removed from the land has paid his taxes and reimbursed him for much of the investment in buying the acres. Growing now is enough timber to build 20 six-room houses, plus

Christmas trees for thousands of families and enough pulpwood to put out several editions of a city newspaper. Within 50 years, Crafts conservatively estimates, he and his children will have received over \$75,000 above expenses from this woodlot—and timber still growing at that time will be worth an additional \$35,000!

While waiting for his trees to mature, Crafts has turned his forest into a recreational asset. He has built a summer cabin in it, using wood from his timberland, and has dammed up a swimming hole and stocked it with fish. His enthusiasm for the woods has so grown that he now spends spare hours carrying on forestry experiments with the help of the state university—testing new methods of growing white pine, trying out exotic species to learn whether they will thrive in his area.

On a carpet of pine needles, I toured the forest with Crafts. I saw once-ravaged land now brought back to beauty and usefulness. Trees had been cropped on a selective basis. That way, you never see denuded, cut-over acres, and thinning leaves room for young trees to grow more quickly. Good forestry management also results in a healthier forest—better for wildlife, sharply lessened fire hazard, fewer insect pests. As I felt the moist, rich soil under my feet and peered into the green cathe-

dral over my head, I suddenly thought—anyone can do this!

Ike League Tree Farm

And so they are, for a multitude of benefits. Some ten years ago, the Waldport, Oregon, Izaak Walton League purchased 40 acres for \$7500 as a recreation center; timber harvested from this land is paying off the mortgage and will finance picnic areas, an archery range and an artificial lake. The timber farm of Donald Mackay in Mt. Carroll, Illinois, furnishes a needed recreation spot in his area; each year he throws the land open for thousands of neighbors to picnic in the woodlands, fish and boat in the ponds. An upstate New Yorker half-heartedly put seedlings into the ground 30 years ago after a conservation official explained that the trees were going to waste anyway; today, they are giving him thousands of dollars income every few years.

Six years ago Fred Braun, an accountant in Antigo, Wisconsin, visited the conservation camp run by the pulp and private-power industries of northern Wisconsin. What he saw convinced him that trees can sometimes earn a better income than stocks and bonds. He started purchasing scrub parcels and now owns 1960 acres. After only a few years, his tree farm was already producing a modest annual profit.

"As an accountant, the sheer economic benefits of tree farming appealed to me," I was told by Braun. "Trees are an excellent hedge against inflation. There are tax benefits—since the federal government regards timber harvests as long-term capital gains. In 15 years, I expect to get an annual income several times what I would have received if I'd invested the money in bonds."

A small woodlot will not support a family, but as a sideline it is a steady addition to the family budget—for education, travel, retirement. Thirteen years ago, the U. S. Forest Service started managing a typical 67-acre tract in east Texas which had been cut over heavily in the past. The foresters carried out on this land the kind of management that would be practical for the average owner. After only ten years, their balance sheet showed an annual return of about \$4.00 an acre—after deductions for taxes, labor, and expenses.

Like a Bank Account

A tree farm works much like a bank account. For example, the Polak brothers of Merrill, Wisconsin, have 200 acres of woodland, purchased by their father 80 years ago and kept under continual management since. This represents their

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Three fishermen are enjoying the Bass Lake campsite on tree farm of Minnesota and Ontario Paper Company near Effie, Minn.



Reading
about

RESOURCES



By MONROE BUSH

WILDLIFE VS. AMERICANS

THE conservation movement, like a martini, is composed of two ingredients. Unlike gin and vermouth, however, the mixings of conservation are often both unpalatable and depressing.

These ingredients are (1) scientific knowledge concerning natural resources, and (2) the human response to such knowledge. For a hundred years the conservation movement has consisted in large (though fortunately diminishing!) part of mixtures of the two that ranged from the terrible to the barely tolerable.

In the early days of the movement the chief trouble was the almost total lack of any scientific knowledge whatever, so that the mixture consisted almost entirely of indiscriminate human response.

During the great Roosevelt-Pinchot era there came into being a considerable body of knowledge which, like a Gobelin tapestry, was shot through with gold threads—in this case, the gold threads of science. But there were other threads woven into the intellectual fabric of that era, and those were nothing more than the cotton of hearsay and the wool of sentiment. But perhaps man's response to what resource knowledge he did possess was never better than at that time.

In later years, thank heaven, there has been spawned, by the untiring devotion of well-trained researchers, a real and solid body of scientific data. Yet the second ingredient, the human response, is in many respects as indiscriminate today as at any time, and the conservation movement remains an uncertain mixture.

Wildlife in America by Peter Matthiessen (The Viking Press, 1959. \$10.00) is the record of this movement as it pertains to wild creatures.

It is the record of the faltering but persistent advance of scientific knowledge, and of man's use and misuse of this data—sometimes to the benefit of wildlife, occasionally to the benefit of himself, and as often as not to the benefit of neither.

The jacket's sub-title is significant: "The first history of man's effect on the fishes, amphibians, reptiles, birds, and mammals of the North American continent." A great deal has been written, particularly in recent years, concerning the biology of these animals. Now Matthiessen attempts a sort of social history of them within the context of human civilization. He documents their fate at human hands—and it does not make for pretty reading.

As long as we were ignorant of the facts of animal life, much could be forgiven in the name of conservation. Later, while we had nothing but the most imperfect knowledge, much could be tolerated as conservation. In these present years, however, with scientific knowledge of wildlife lighting many dark corners, the hesitant, indecisive steps of the conservation movement are a sad commentary indeed upon the human response to incontrovertible fact.

The evidence which Matthiessen presents is a clear indictment of the hit-or-miss, hot-and-cold, too-little-and-too-late attitude of the American people toward the needs and rights of wildlife, as we understand them. And experience indicates that what applies to wildlife applies equally to many other facets of natural resources. Not only are many species of wild creatures still on the decline and nearing extinction, but the pollution of our rivers, the destruction of recreational lands, the precarious balance of the timber

supply, all this and more point to a perverseness in human nature not unlike that which slaughtered the bison and the passenger pigeons.

The techniques of conservation belong to dedicated experts, but the implementation of these techniques rests with a great society of 180 million people who still have a cornucopia-complex.

And Matthiessen makes quite clear: It is not yet the end. His book, written with distinction and illustrated with taste—and beautifully published—carries a broad warning in respect to all resources. The usual fate of an effort such as this, inspired by scholarship and wisdom, is to go unheeded except by that small band which already shares the author's perceptions.

NEW AND TO NOTE

Washington's Public Affairs Press has recently issued two books that fill a special place in the library of resource literature. **The Conservation Fight**, From Theodore Roosevelt to the Tennessee Valley Authority, by Judson King, and **The Case for Farmers**, by James G. Patton, are strongly conceived, strongly argued works that take a position—and no mistake about it!

Judson King stands four-square on the side of public power. James G. Patton is the president of the National Farmers Union. Each man would be considered a liberal by modern definition, and whatever one's personal reaction to this may be, certainly all sides can agree that these men are extraordinarily gifted spokesmen.

The Conservation Fight is crammed to the brim with data. Not all the data, of course, but as much on this subject of public power as I
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The Hunters Conflict

By ROBERT R. BOWERS



FOR twenty years, mine was the role of the hunter. Despite my griping about posted lands and irate farmers, the living was easy. When one tract of land was posted, I merely moved on to another and did my hunting. At its worst, it was inconvenient. Since I was doing no wrong in just trying to find a favorable place to hunt, it was plain that the trouble lay with the farmer who jealously guarded his land with "No Hunting" signs and posters.

A few years back, my role was drastically altered. My hunting interest continued, but with it I assumed the role of the landowner and farmer. With this sudden combination of two directly conflicting aspects of hunting, my own thoughts, outlook, and perspective changed. My entire disposition was almost automatically changed by the signing of a deed to 123 acres of farm and forest land.

My very first thoughts were undeniably selfish. My attitude changed from one of patronizing sportsmen to almost complete intolerance of them and their plight of finding a place to hunt.

When a man has lived only as a sportsman most of his life, then several years as sportsman and conservationist, and finally as a landowner, it requires some pretty deep soul-searching if his feelings are to be kept upon an even keel. I now find that my lopsided views of earlier days arise to haunt me. The things which I believed so staunchly before now have another side, one which is rarely seen or understood by the sportsman on the one side or the farmer on the other.

Hunting is a vital part of my 123 acres of farm and forest land. Without it, the land would lose much of its luster to me. Yet men of greater means than mine hunt here, and they would become ruffled were "no hunting" signs to deny them such a privilege. But few men are so endowed with worldly riches that land of this nature can be purchased for hunting alone. Certainly, I am not. So, the first consideration must be the economic return from the products produced which will assist with the monthly payment on the mortgage. All else must of necessity be secondary, not because I want it that

way but because I can't afford the land on any other terms.

This is perhaps the most obvious point that a farmer makes in defending his action of posting. Yet it seems the least condoned or understood. However, in my short span as an accommodating landowner, it has become intensely evident that the honest conflict is not, as many claim, the damage which hunters do, although that is a part of it. Nor is the conflict based primarily upon broken fences, or the farmer's selfish interest in harvesting the game himself, although that too is a part of it.

What most of the hunters I have come upon do not seem to recognize is the fact that farmers like to hunt too. Already it has been my lot to race perfect strangers to my favorite squirrel stand on my own land. In two out of three such experiences, I lost the race. In two of three such instances, my visitors got their limits and I got one. Still, being subjected to the hunter's circumstances so long helped me to rationalize these events. Most farmers are not so easily pacified when they must fight for what is theirs by law.

On one occasion, when my partner and I were digging holes and planting chestnut trees a week before the rabbit season opened up, two men were hunting our fields for rabbits. These men had no land of their own, and they were quite upset with me when I ran them off. It seems one was a neighbor of mine who had invited a friend to hunt my land. He was embarrassed by my lack of consideration. For this reprisals were intimidated, which caused us to reappraise the justification of other farmers in the area who assumed a "look the other way" attitude when poachers moved onto their land.

For many weeks thereafter we wondered and we worried whether the fields would suspiciously catch fire, or the chestnut orchards would be mysteriously girdled. Such apprehension is a factor to be reckoned with, and it puts another light upon the farmers you haven't understood these many years. Such threats may never be carried out, and probably wouldn't be, but what if they were? What farmer can afford the chance?

Involved here, I believe, is one of the greatest conflicts faced by the hunting sport, yet it is one which has rarely if ever been expressed in writing. The reason is that the conflict is so much concerned with emotions that one finds it difficult to express in words. Few farmers write for publication, and unless one has been a farmer he could not know intimately the conflict which is involved. There is the unappreciated emotion a man feels about his own

land, as opposed to his thinking when he owns no land. It is the emotion of a man who loves to hunt, and for others to hunt, mixed up with emotions involved in making a living on the same land.

As difficult as it may be to understand, a landowner as often as not feels a certain pang of conscience when he must deny a man the right to hunt. Certainly, I do. This conscience-stricken man often reflects his grief in the form of anger. He is honestly repulsed by the idea of denying his fellow man the right to share his products, whether it be game, fish, pigs, or corn. Most of us have an intense desire to share our good things with our fellow man, and farmers are even more inclined that way. Yet, modifying this attitude is a strong obligation to his land, and the definite need to make a living from it. My own obligation is extended to the crops, from which income is gained, to the wildlife which lives among the hedgerows, in fields and woodlands, and by my own selfish interest in hunting my own game at my leisure, rather than racing others for it. How much time and work a farmer can give to the wildlife side of farming may fairly well determine how attractive his farm is to hunters. Knowing this, a man must have a rather deep feeling for hunting if he leaves anything for game.

While the farmer rarely asks favors, no man is more grateful nor more willing when favors are offered to repay them in the best way he knows how. That way is very often in hunting privileges. When such a hunter is offered the right to hunt, no one is happier than the farmer when his visitor has a good day, nor more disappointed when the game is scarce.

When our four eight-weeks-old Hampshire pigs got out of the barn and ran off on Labor Day, 1959, one day after we purchased them, where were the hunters who hunted my land that fall? Playing golf, perhaps, or fishing another man's stream? My two neighbors play golf and both love to fish, but they spent an entire holiday combing the hollows and valleys and climbing hills looking for my pigs. They volunteered. These men love to hunt also, but their work kept them from visiting my farm during the first week of the season.

A question arises here which needs an answer. Am I to sacrifice the game in my fields to perfect strangers who just want to hunt, when

people like my neighbors can't hunt until Saturday? Do I owe an obligation to the people who have given me a hand when it was desperately needed? Yes, farmers like to pay their debts, but what debt, as such, is owed the average sportsman who never goes near the land until opening day of the hunting season?

Every farmer in my valley needs help, but he either can't find it or can't afford it when brush needs to be cut or crops need tending. One wonders where the sportsmen were when these chores needed to be done—the same ones who kicked the brush in every field in my valley last fall.

I have never known a farmer who had as much help with the chores as he needed. All but a very few have annually contended with hunters criss-crossing their fields in pursuit of rabbits and quail. Some of these hunters ignored the posted signs and hunted just out of range of the farmer's voice, while others politely asked permission to hunt. Not one hunter to this day has ever once volunteered a minute of his time in my valley to assist the farmer with any chore.

Farming is thought of as a seasonal business, with winter time the season of rest. Any man who has ever farmed for a living will tell you that is not true, but non-farming people think it is. Sure, it's a seasonal business. There is a time to plant, a time to mow, and a time to harvest, with lots of "time" in between for a million other chores. There is also a time to cut brush, clear fields, sow rye, prepare the fields for spring planting, build ponds, repair fences, clean the barn, and feed the stock. All of this takes place regularly in the fall and winter, just when the hunting season is in full swing.

In respect to the fall season, this "season of rest," I had to contend with a problem familiar to farmers who love to hunt. We had hired men to help us meet our tree planting deadline. It was necessary to have 5000 pines in the ground before freezing. The ground already was hard-crusted in the morning. One man is supposed to plant 500 trees per day if he is in good shape and used to planting. Five of us planted on Friday, Saturday, and Sunday and got a grand total of 3000 trees in the ground. Yet, while we planted, hunters were banging away at my rabbits in the fields adjoining the planting area. Beagles were running rabbits practically between our legs, and occasionally a shot seemed to shatter

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WHITE ROSE OF FINLAND AWARD

The Order of the White Rose of Finland, highest ranking civil merit order of that country, has been conferred on Raymond E. Marsh, a former Assistant Chief of the Forest Service, for his service in making Finland and particularly Finnish forestry known in the United States. According to the announcement made by Ambassador R. R. Seppala, of Finland, Mr. Marsh is the first American to be so honored by his country. In 1958, in a similar honor from the Swedish government, Mr. Marsh was made an Officer of the Royal Order of Vasa. Mr. Marsh first went to Scandinavia in 1951, after his retirement, and has since published a number of carefully-documented reports and articles, some of which have been translated into a number of foreign languages. Mr. Marsh is a graduate of Dartmouth College and the Yale School of Forestry.

If there is an insurable risk present, we make it a policy to insure. Insurance against forest fire loss is a darn good business."

That is how one official of a Seattle bank feels about a bold new strike being taken in Pacific Northwest forestry.

Here in the tall timber country that gave birth to the Keep Green movement and the Tree Farm program, a long-sought goal in forest management has been established: forest fire insurance in the Douglasfir region of Washington. This move to strengthen the economic future of second growth timber ownership is being made by the Farmers Mutual Insurance Company of Enumclaw, a pioneer Washington firm with home offices located within the very boundaries of the Cascade forests.

Revolutionary as the concept of insuring forest stands is in the northwest, the idea is not a new one. Such insurance is now a fact in several foreign countries. Notable among these is Norway, where an estimated 80 per cent of the commercial forest land is covered by forest fire insurance. Even in the United States, insurance of standing timber was started as early as 1917, in the form short-lived, liquidating its operations of a mutual company founded in New Hampshire. The venture was in 1919. In 1937, Forest Service economist H. B. Shepard conducted an intensive study of the forest fire picture, reaching the conclusion that the Douglasfir region could conceivably support such a program. At that time no insurance company cared to take up the challenge.

In 1955 the South Carolina Insurance Company began to underwrite forest fire insurance in the southeast. Shortly after expanding their coverage to certain areas in California, this company too ceased to write forest fire insurance. The reason given was lack of acceptance by forest owners. Currently, in the eastern United States, this type of insurance is offered to forest owners by the Forest Insurance Company of Atlanta, Georgia.

Now, at last, a mutual insurance company has brought forest fire insurance coverage to the Pacific Northwest. This new program is designed to meet the wants of the second-growth owner and tree farmer, whose holdings promise to become a vital part of the region's future forest economy.

The potential is there. Holdings of from 10 acres to 5,000 acres account for 50 per cent of the private-

ly owned commercial forest land in the Pacific Northwest. Pierce County, Washington, with 4,400 small forest owners, has the largest number west of the great plains. Clark, Lewis, Skagit, and Snohomish Counties are other western Washington areas dotted with small ownerships.

However, even with the woods full of potential customers, basic problems had to be overcome to interest the landowners in insuring their second growth timber. To avoid the feeling that an insurance

company knows too little about forestry to properly write coverage, the talents and experience of top northwest foresters, including Charles Cowan, former manager of the Washington Forest Protection Association, went into the setting up of this new program. A firm of consulting foresters, Greenacres, Inc., of Seattle, has been retained to carry out the highly technical aspects of rating and evaluating potential insurable risks. Greenacres manager

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A Bold Step Forward

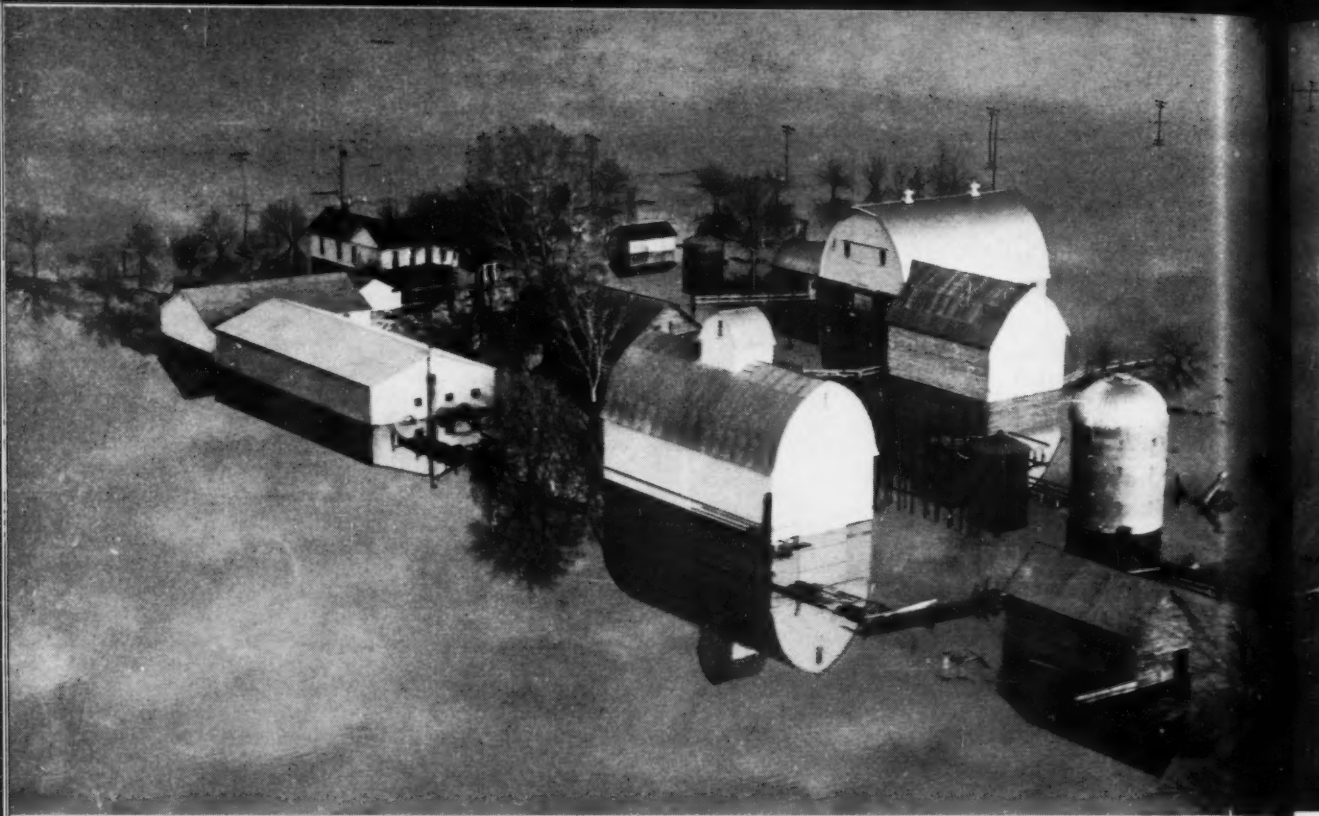
By RICHARD PARDO



Presence of a railroad will add to the base rate of an insured property

If gated and locked private road through stand will not affect base rate





Running water, be it small stream or flooding river, constantly wears away the earth's surface and pushes solid particles to sea.

What Can We Do About W

By HOWARD MENDENHALL

THE severity of tomorrow's water problems depends upon today's action. If we continue crisis-to-crisis planning and development, we will continue to have a patchwork of disconnected, unrelated water developments. Looking back into many watersheds, we can see the "what might have been." How much longer can we afford the luxury of short-range water planning? How much longer can we afford to build single-purpose impoundments that have to be justified solely for "flood control," "drinking water," or "fish and wildlife management"? How long can we afford to only partially utilize a reservoir site because at the time of construction only a single purpose or a very limited geographical area was considered?

The eastern half of the country can no longer be as profligate with its water reservoir sites as it once was. The water-conscious West can teach the East much about multiple use of reservoir sites. However, even in

the West conflicts remain that are within the capacity of human minds to resolve.

The need for additional research, planning, and co-ordination in the field of water development must be faced up to and resolved on local, state, and national levels. We can no longer ignore or push under the carpet inter-agency disputes and jurisdictional wrangles if they impede progress in rational watershed development. We sorely need a national set, flexible yet firm, of "guiding principles" to make up a sound long-range water development program.

California and Ohio are two states that have taken some effective action on their internal water problems. But, at the Interstate Conference on Water Problems, conducted last spring by the Council of State Governments, it was vividly pointed out that many states had allowed their water agencies to become so ineffectual that initiative in water development was going by default to the

federal government. Abel Wollman cited some of the causes of this and the disastrous effects that could accrue by over-dependence on a single centralized water agency. He also pointed out that the poor water service in many of the major cities of the world was directly traceable to nationalization of water distribution facilities.

Local, state, and private initiative is the apparent answer to getting the job done. But sometimes the job is too big, if done properly, to be accomplished solely by a local, state, or private concern. Sometimes a little boost is needed to encourage and make possible a worthwhile development. Perhaps a story of local endeavor to work out a "local" water problem will illustrate the point.

The story starts in 1954 in the headwaters of the Big Muddy River (a tributary of the Mississippi), where there was and still is extremely high unemployment. Two severe economic blows, both involving the

the terrific toll that siltation had taken. Over the years, reservoir capacities had been shrinking while water consumption had been growing.

Alarmed citizens, when aware of the possibilities of damming up the Big Muddy River in the vicinity of the ghost mining town of Rend City, quickly formed the Rend Lake Association to do it. The 4,000-member organization found out that even though they were incorporated, they had no power to act.

Therefore, in January, 1955 they conducted an election to create the

two-county Rend Lake Conservancy District. It had authority to develop water resources, limited taxing and bonding powers, the right of eminent domain, and the authority to enter into agreements with other units of government.

At the request of the six citizen trustees, the State Legislature appropriated funds to the Illinois Division of Waterways to make a detailed engineering study of the Rend Lake site. The Illinois Public Health Department investigated the multiple community water supply potential.

(Turn to page 57)



Anchors Aweigh!

The U.S. Navy Band Orchestra and the "Sea Chanters" will participate in the official "unveiling" of the Water Conservation Stamp at the Seventh National Watershed Congress the morning of April 18 at the Statler Hilton Hotel in Washington.

Postmaster General Summerfield will make the official presentation of the four-cent commemorative stamp. On hand will be Ezra Taft Benson, Secretary of Agriculture, and Fred Seaton, Secretary of the Interior. Donald Williams, Administrator of the Soil Conservation Service, will be keynote speaker at a special Water Resources Stamp Luncheon following the morning ceremony. Other participants in the three-day conclave include two governors, and the heads of numerous national and state conservation organizations. (See AMERICAN FORESTS, January)

Copies of the official first day envelope for the stamp may be obtained by writing the Washington Press, 43 William Street, Newark 2, New Jersey, at the following costs prepaid: Two envelopes, 21 cents; four envelopes 35 cents; 10 for 75 cents; and 20 for \$1.35.

A special Watershed Congress Stamp Committee consists of: James B. Craig, Chairman; Alvin C. Watson, Donald W. Van Tuyl, Joseph W. Penfold, Harper Simms, Harry E. Radcliffe, E. Budd Marter, and Daniel A. Poole.

Water?

lack of water, were dealt in rapid succession.

Blow number one was that a large national coal-using industry, which would have employed 2,500 men, failed to locate in the area because of no firm supply of cooling and process water. The company was so interested in the coal, labor, and transportation facilities of the area that they had their engineers investigate the proposed Rend Lake dam site on the Big Muddy River. However, because of the time factors involved, they were unable to recommend locating in the area.

Blow number two was the drying up of almost all of the area's water supply reservoirs in the summer of 1954 at the culmination of a three-year drought. Every city and village in the area was faced with an agonizing appraisal of its water sources. Tight restrictions, emergency pipe lines, railroad tank cars, and trucks solved the immediate problems. But thinking town leaders saw first-hand

BEAVERS, BONES A

DEDICATED to the Education of Man in the Stewardship of the Natural Resources Entrusted to Us All by Our Creator."

This—on a bronze plaque.

In a nutshell, these words represent the partnership of conservation and religion as symbolized by the new Ghost Ranch Museum fourteen miles north of Abiquiu on U. S. 84 in northern New Mexico. It was presented by the Charles Lathrop Pack Forestry Foundation to the Board of Christian Education of the United Presbyterian Church in the U. S. A. on July 11, 1959, and is now open to the public seven days a week. It is the final major gesture towards making Americans conservation-conscious which this nearly exhausted foundation has made to our country.

"This is a museum of creation," says Arthur N. Pack, foundation president and son of the founder.

Ghost Ranch is a sprawling rangeland of 22,000 acres at 6300 feet altitude amid piñon and juniper 62 miles northwest of Santa Fe in the

◀ Mountain lion comes to the wire to greet visitors



AND BEAUTY

By HIRAM L. and ANNETTE R. PARENT

historic Chama Valley. The ranch was a personal gift of Arthur and Phoebe Pack to the church for religious educational use some four years ago. The ranch is a game preserve and has no cattle on it, in an attempt to restore it to the grassland condition of many years ago. The museum is the brainchild of the creative genius of educator and resource conservationist William H. Carr. As educational director of the foundation and assistant to the president, he conceived the idea of an institution which would primarily serve the local scene, which has hitherto had scant opportunity to absorb the principles of conservation, and yet at the same time would reach out to a wider public. The museum aims to teach natural history and conservation in terms of the past, the present, and the future. What it lacks in quantity, it more than makes up in quality. The main building is small because most of the display is outdoors.

Focal point of the entire exhibit is a unique beaver display. As Mr.

Carr, the museum's director and a life-long authority on these fur-bearing animals, says, "Next to people, I like beavers best! Beavers tell the whole story of conservation. They are experts in the wise utilization of what nature places at their disposal—and set a fine example for us humans."

In accordance with his interest in beavers, Mr. Carr has donated the extensive private collection of fifty prints and 3000 documents which he has accumulated through the years. They illustrate graphically and in detail what the beaver makes—his canals, houses, tree cuttings, large and supporting dams, plus his physical characteristics, his life habits, his fur, and his role in history.

"Beavers stored soil," says Mr. Carr. "They checked erosion, built humus, attracted all manner of wildlife to the lakes they built, and were indefatigable workers in the preservation of the productivity of the land in which they resided."

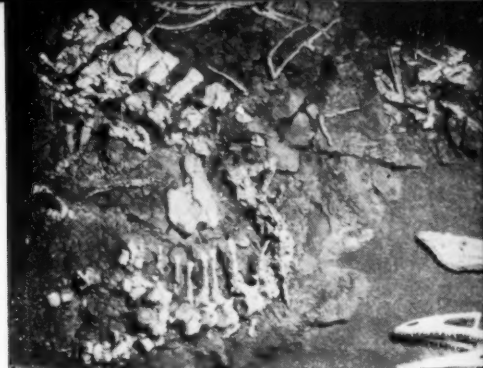
Along the Chama River, which feeds into the Rio Grande thirty-

Fossil bones of earliest known dinosaur, *Coelophysis*, and those of a *Phytosaur*, were found three miles from museum

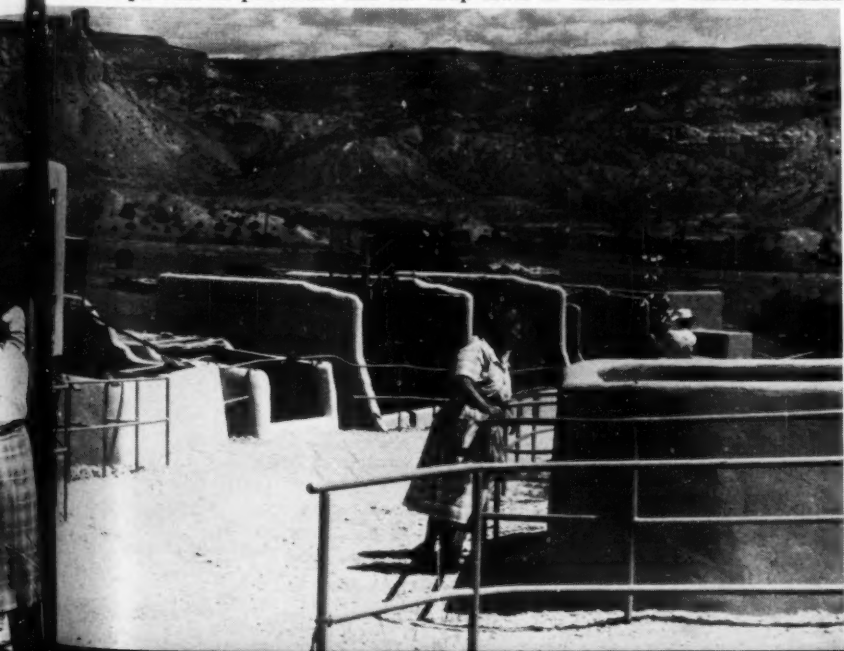
eight miles below the museum, these tireless mammals since time immemorial built dams across every inlet, creek, or rivulet, sometimes as many as seven supporting structures behind the main dam. When their fur became the most popular material for hats, trappers cleaned them out by the hundreds of thousands. Sixty thousand beaver pelts passed through the adobe hamlet of Abiquiu in 1822 on their way to the hungry world hat market. These skins brought \$150,000 to traders and trappers there in 1830. And those were dollars in those days.

While the followers of fashion enjoyed their sartorial elegance, the land was stripped of one of its staunchest allies. Following the trappers came the ranchers and overgrazing to finish the damage. Today, the live specimen is almost extinct in the once-lush valley, and the river runs red with the fast-vanishing topsoil which washes unimpeded down the once-protected slopes. Economic progress has bypassed the Chama Valley which was so rich in natural wealth. The use of Oriental silk instead of beaver is credited with saving the handful of remaining animals from utter oblivion. If this single interesting fact can cause visitors to stop and think, the museum will have fulfilled its purpose. However, many other exhibits contribute to painting the many-faceted conservation picture.

The surprise package and one that is also indigenous to the area is an exhibit of *Coelophysis*, the oldest known dinosaur. The only site in the world to have yielded complete fossilized skeletons of the *Coelophysis* is located at the base of the cliffs on Ghost Ranch three miles from the museum. The resting place of this diminutive dinosaur was discovered by an expedition of the American Museum of Natural History led by Dr. Edwin Colbert in 1947. When Mr. Carr decided he wanted to have



Animal pit with its penthouse and the drop tower at entrance to outdoor exhibits





Little Chief Running Bear receives morning handout from museum attendant



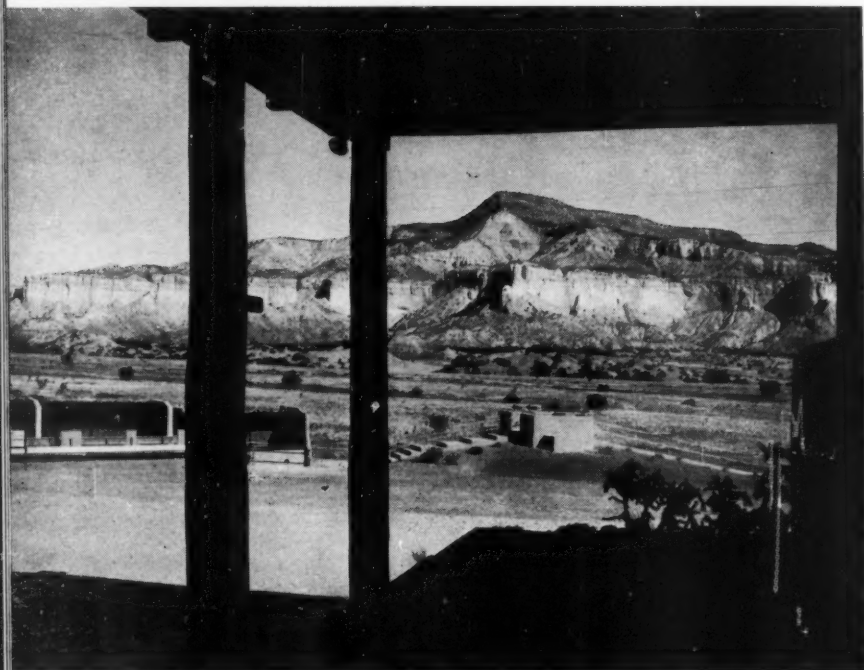
Visitors to outdoor exhibits may see a wildcat in his penthouse, basking in sun

the *Coelophysis* as a feature of the indoor exhibit, he contacted the museum authorities in New York and asked if the Ghost Ranch Museum might have one of the thirty "blocks" of stone containing the fossils which had been shipped east. His request was quickly granted and the museum received the initial 1200-pound plaster-encased "block" to be taken from the site. An expert paleontologist was hired to relief the bones out of the block to make up the display. The *Coelophysis* came home after a journey of 5000 miles to lie in state in his own environs.

Contrary to expectations, the ex-

posed bones are of a birdlike creature barely six feet high. This creature roamed the earth 200 million years ago, many eons before the gigantic *Tyrannosaurus Rex* and *Brontosaurus* with which the public is more familiar, thanks to comic strips, horror movies, oil company advertisements, and excellent museum displays. The amount of time that lapsed between these early modestly-proportioned dinosaurs and their huge successors is dramatically emphasized through the popular "Walk Up Through the Ages." The visitor symbolically climbs through one hundred and thirty million years

The primary aim of Ghost Ranch, a sprawling rangeland of 20,000 acres at 6300 feet elevation, is to teach natural history and conservation in terms of past, present, future



of time. On each of the series of five steps an elbow telescope focuses on a particular geologic strata of the spectacular multi-colored cliffs which face the museum across the range a mile and a half away. Labels delineate the characteristics of the rock at the different levels. The *Coelophysis* was found in the Chinle or bottom layer at the base of the cliffs. Separated from it by hundreds of feet of elevation and a hundred and twenty million years of age is the Morrison formation in which in other areas of the country were found the fossilized bones of the better-known prehistoric monsters. With contemporary placing of premium on size, it is interesting to note that in geologic terms, it was the little fellow who came first!

On the platform at the top, an accurately reproduced relief map representing about five by two and a half miles of the surrounding terrain is followed by one final exhibit. Instead of a telescope, a mirror confronts the visitor. A label asks the succinct question: "The highest form of life?"

The native flora and fauna form a major part of this nature museum. Inside the building, whose attractive H-shaped design was originated by Mr. Carr, are the local snakes, toads, lizards, frogs, ground squirrels, and insects. Outside in a series of pastel-painted animal pits are prairie dogs, skunks, porcupines, badgers, a black bear cub dubbed "Chief Running Bear," a bobcat, a mountain lion, and a coyote. One of the largest remaining prairie dog villages in America lies on the range within a couple of miles of the museum. However, those on display were brought, as were all the other animals, from the famed Arizona-Sonora Desert Museum outside Tucson.

A walk-in bird cage allows people to mingle without intervening bars or wire with the ravens, piñon jays, and magpies which fly freely and noisily inside. One raven, the gift of a local small boy, somehow worked loose the handle of a water faucet. It was seen in his beak. But it has never been seen since, so successfully did the busybody feathered creature hide it. It seems that visitors had better not drop anything that the bird can lift. It might disappear permanently!

Nature trails, long and short, with samples of the shrubs, cacti, and flowering plants of the region lead off from the museum across the plain toward the cliffs.

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Litterbugs

CLIMB HIGH

By WELDON F. HEALD

WE AMERICANS ought to be ashamed of ourselves.

We are without doubt the messiest people in the world. As we surge forward with unprecedented growth and unparalleled technological progress, we are leaving behind an appalling trail of rubbish, litter, junk, and just plain filth. Our cities are crammed with it; our highways are lined with it; even our magnificent recreational areas are becoming choked with it. From Atlantic to Pacific we wallow in the accumulated waste and offscourings of a profligate civilization.

Most of us are inured to the situation as being an inevitable part of modern life. However, some of our more socially-conscious citizens have gotten anti-litter laws passed and warning signs put up along the main routes of travel. They hope that eventually an educational campaign may wake up the public to the unsightly mess it is making. But the total results to date are far from encouraging.

For example, last summer more than two tons of discarded cans, hundreds of pounds of broken glass, and countless heaps of garbage, paper, and cast-off clothes were cleaned up in one small California area. Was it on a major traffic artery used by thousands of travelers? Not at all. This unlovely clutter was found in a roadless wilderness. These were the leavings of outdoors enthusiasts and nature lovers along the thirteen-mile trail to the top of the state's highest peak, Mount Whitney. And it took 30 people nine days to get rid of the culch!

The project was the first outdoor house-cleaning job staged by the newly formed Anti-Litter Committee of the Sierra Club's Angeles Chapter. With 14,600 members and chapters throughout California, as well as in several other states, the club is the largest hiking, climbing, and conservation organization in the

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During heavy winters, deer and elk resort to eating aspen bark to survive

The Golden Aspen

By RICHARD and IRENE BIDDLE

OF all the trees of Europe and America, none have such romantic and picturesque legends surrounding their past as does the quaking aspen.

Trembling aspen or quaking aspen, part of the willow family, abounds prolifically in the United States. In fact, it grows as far north as the Yukon Valley bordering the Arctic Circle and as far south as Mexico. It is one of the few trans-continental trees from Maine to California, though only a small tree in the eastern states.

In the West, it will grow to 90 feet on favored, sunny hillsides. A vacationing camper has as his constant companion the rustling, whispering aspen in the high, cool places close to rushing waters. The straight trunk of the aspen with smooth, sometimes white bark is a color note as vivid as the northland's birch. It often grows in huge groves, or it may be found as only a sprinkling of a few trees to break the monotony of the vast dark coniferous forests.

Devastating fires can quickly mow down a grove of aspen. However,

this may be the chief factor in the abundant stands of aspen groves later, because this tree recovers quickly after a fire. The seeds thrive in mineral soil such as may be laid bare after the humus is destroyed by fire. Wherever water is available, millions of seedlings will spring up on burned-over lands, a miracle of the battle of nature to survive. Frequently the roots will send up thousands of suckers after a fire, thus re-establishing themselves. Ecologically, the evergreen is called climax vegetation, and eventually it will replace the aspen which serves as cover and protection for young conifers.

In earliest spring, each female tree will be covered with wind-pollinated flowers which, when turned to seeds, are carried everywhere by the slightest breeze pushing the fluffy down surrounding the seed. Some trees will have an abundance of seed without a viable embryo which renders the seed impotent, possibly nature's remarkable check and balance system trying to cut down on an overabundance of seedlings which might starve for the lack of nutrition in a limited area.

The light green of the aspen's early leaves is noted and admired with the blooms. But the real appreciation of aspen comes after

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Aspen grow at high elevations, such as Lily Lake, since they can endure rarified air



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Johnston Re-elected AFA President

Board urges Congress to hold up Wilderness Bill enactment pending outcome of ORRRC Study in 1961; ORRRC urged to make strong policy recommendations pertaining to areas of recreational responsibility; Report by Parks director heard; Full support voted for proposed Multiple Use-Sustained Yield Bill covering the national forests

DON P. Johnston of Wake Forest, North Carolina, was re-elected president of The American Forestry Association for his ninth consecutive term at a meeting of the full board in Washington on February 19.

At the invitation of the board, Conrad L. Wirth, director of the National Park Service, gave an off-the-record report on Mission '66 and other problems presently confronting the National Park Service. A similar report will be heard by the board in June from Richard E. McArdle, Chief of the U.S. Forest Service, on his organization's Program for the National Forests.

After a complete review of the association's 30-year-old Trail Riders of the Wilderness program, which last year topped all previous records, and a complete re-examination of the history of the so-called Wilderness Bill now being considered by the appropriate Senate committee, the full board strongly recommended that Congress postpone any action on the measure in the public interest until the nation has had an opportunity to examine the report of the President's Outdoor Recreation Resources Review Commission due in September, 1961.

In a resolution that was unanimously adopted by the board, it said:

Be It Resolved, that any sound concept of administration of public wilderness areas should be based on factual information, and inasmuch as the President's Outdoor Recreation Resources Review Commission is making a detailed study of recreation conditions throughout the country with a report due in September, 1961, we believe it would be in the best interests of all the people of this nation who are concerned with this important problem that no special

legislation be considered until such time as the commission's report is completed and available for study. Present administration by the public agencies is at a high level and there is no emergency calling for hurried action that might be premature or ill-advised.

Therefore, in order to have full factual information of value, the Outdoor Recreation Resources Review Commission should bring forth specific recommendations including definitions of the various classes of recreation responsibilities at all levels of government.

While the board said it did not presently know the type of report the President's commission will make, it felt strongly that an effort must be made to define recreation policy and areas of responsibility in order to preclude the possibility of misunderstanding between agencies that might react adversely to the public interest.

In another action, the board unanimously threw its full support behind the proposed Department of Agriculture bill that would legalize the multiple use-and sustained yield programs now being administered on the national forests. The bill, the first major legislation affecting the forests for nearly 63 years, would: 1) Direct that the national forests be administered for sustained yield of their several products and services; 2) Direct that they be developed under multiple-use principles, and declare a congressional policy that they are established and shall be administered for watershed, timber, range, outdoor recreation, and fish and wildlife values; 3) Authorize co-operation with other groups in national forest development.

Up to this time, the national forests have been managed under the Act of June 4, 1897, which reads:

"No public forest reservation shall be established, except to improve and protect the forest within the reservation, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States."

In short, whereas the act previously called for timber and water management, the new bill would legalize management already being carried on under the secretary's regulations concerning outdoor recreation and other multiple use values.

Some discussion arose within the board on priority listing of uses as set forth specifically in the proposed bill which reads that it shall be the policy of the Congress "that the national forests are established and shall be administered for *outdoor recreation, range, timber, watershed, and wildlife and fish purposes*." However, staff members explained that the listing was purely alphabetical in nature and had no connection with so-called priorities. If that be true, why is "fish" last and why is the word "outdoor" placed before "recreation," one member asked. Others said they would prefer to see the words "timber" and "water" first.

In other actions, the board authorized a grant to bring outstanding foreign foresters to the Fifth World Forestry Congress this summer at Seattle, authorized department heads in the association to attend the congress, and approved further expenditures for properly welcoming visiting dignitaries, such ceremonies to be worked out in conjunction with the Society of American Foresters.

The board further approved an appropriation for a pilot study to determine how a conservation kit for teachers and school children can

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OVID BUTLER

Pioneer in Forest Education

Butler University in Indianapolis, Mr. Butler received his A.B. degree from that institution in 1902. From 1903 to 1905 he worked as a reporter on both the *Indianapolis Journal* and the *Indianapolis News*. According to newspaper colleagues, he had a promising future as a journalist. He was fond of recalling that on one occasion, due to the press of the crowd, he had to make notes on an address by William Jennings Bryan while lying on his stomach under the speakers' platform.

However, just as space exploration is exerting appeal for alert young men of today, Mr. Butler became interested in a new scientific development of his young manhood—something called "forestry." The year 1905 found him enrolling in the Yale School of Forestry. Obtaining his Master of Forestry degree in 1907, he went to work for the United States Forest Service as a forest assistant on the Boise National Forest. In 1910 he was transferred to Missoula, Montana, arriving just in time for the worst fire season that area had ever endured—an experience that developed in him a lifelong hatred of forest destruction.

Mr. Butler spent part of 1914 and all of 1915 in directing a study of lumber distribution for the Forest Service. His final report, "Distribution of Softwood Lumber in the Middle West," was the most comprehensive analysis of the distribution of lumber from the mill to the ultimate consumer ever made up to that time, and it drew the young forester to the attention of many leading businessmen in the nation.

Following service in Albuquerque, Mr. Butler was transferred to the Forest Products Laboratory upon the outbreak of World War I; he served as assistant director from 1916 until 1922.

One thing that set Mr. Butler apart from many of his forestry colleagues of this early period was his ability to gather facts and write them intelligently in a manner lay-

men could understand. Noting his aptitude in this respect, The American Forestry Association drew the young forester to Washington, D. C. in 1922 as its chief forester and the following year made him executive director and editor.

Mr. Butler's leadership in the association was marked by many conservation milestones. The following are some of the most noteworthy:

1) Beginning in the 1920's, he threw the whole weight of the association behind the program to achieve improved federal-state cooperation in forestry, a campaign that was fulfilled with enactment of the Clarke-McNary Act.

2) When western stockmen sought vested rights on national forest grazing lands, Mr. Butler personally led the fight to defeat the vehicle by which they hoped to achieve that end—the notorious Stanfield Bill. To defeat this measure, Mr. Butler travelled widely in the country, wrote a series of powerful editorials, and successfully defended his position when called up on the Hill before an unfriendly Senate committee.

3) Mr. Butler vigorously opposed federal forestry regulation, and split with Mr. Pinchot on the issue. In Butler's judgment, the regulation a) wouldn't work, and b) was a proposal that transcended the bounds of forestry *per se* and was contrary to our way of life.

4) In the late 1920's, he conceived the idea of an intimate, hard-hitting attack on the southern custom of woods burning and raised \$150,000 to translate his plan into action. Utilizing for the first time in forestry the full power of visual education, Mr. Butler sent special caravans deep into Dixie to preach the importance of forest conservation at every crossroad.

5) In the mid 1940's, Mr. Butler launched a nationwide fact-finding survey to reveal to the American people the condition of their forest
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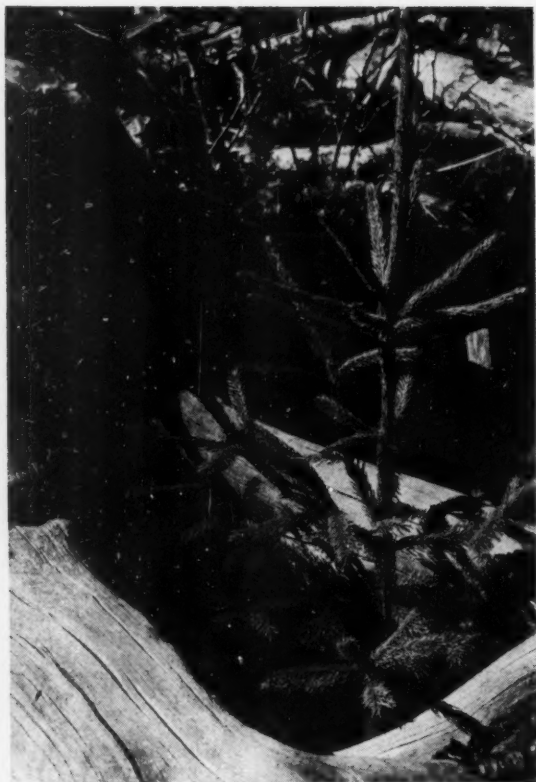


Mr. Ovid Butler, right, and Col. W. B. Greeley stood shoulder to shoulder in opposing federal forestry regulation.

OVID Butler, Executive Director and Editor of The American Forestry Association for more than a quarter of a century from 1922 to 1948 died on February 20 at George Washington University Hospital in Washington, D. C., following a stroke. He was 79 years old.

In the field of public education in forestry, Mr. Butler stood alone, according to colleagues. Writing in the May, 1950, issue of *AMERICAN FORESTS*, Henry Clepper, executive secretary of the Society of American Foresters, called Mr. Butler one of the 10 most influential men in American forestry history. "As much as any man of our time, he helped to make conservation a household word and forestry a familiar concept," Mr. Clepper said.

Mr. Butler was born in Indianapolis, Indiana, on July 14, 1880, the son of Scot and Julia (Dunn) Butler. A grandson of the founder of



Scattered throughout the forest are red spruce. Some are 50 inches tall, although most are considerably smaller

A FOREST RECOVERS

By RICHARD G. SMITH

The mature growth in this region is
predominantly a spruce-fir complex





A DOZEN years have elapsed since Mount Desert Island, Maine, suffered the destruction of a forest fire of major proportions for an eastern state. During these twelve years, regrowth has progressed at a rate which delights the resident, and to a point where many visitors are unaware that anything has happened.

Mount Desert Island, located at the northern end of the Gulf of Maine, comprises an area of approximately 100 square miles, of which about 30,000 acres lie in Acadia National Park. The island, connected to the mainland by a stationary bridge less than 100 yards long, is formed by Frenchman Bay on the east and Blue Hill Bay on the west.

Mount Desert Island consists of four political subdivisions or towns, all within Hancock County, of which the township and village of Bar Harbor are probably the best known. The other three townships are Mount Desert, Southwest Harbor, and Tremont, each of which has several villages within its limits. The island comprises a roughly circular area except on the south side, where Somes Sound, a fiord, nearly separates it into two islands. Locally, the areas lying on either side of Somes Sound are called the Eastern Side and the Western Side.

Physically, Mount Desert Island consists of several types of areas. The northern part of the island features low, rounded hills, separated by many poorly drained areas, and is, for the most part, privately owned. Through the center of the island, trending in a northeast to southwest direction, lies the Mount Desert Range, a granite barrier thoroughly dissected by the erosional effects of running water and later by extensive continental glaciation. The result is a range of low mountains so deeply notched that it no longer retains its identity as a range, but appears as a series of north-south trending ridges. On the Eastern Side the slopes of this range of low mountains follow southward to the sea where some are truncated, forming some of the outstanding features of the rugged shore. On the Western Side the mountain slopes do not reach to the coast; here the shoreline is relatively low, and many poorly drained areas can be found. Acadia National Park

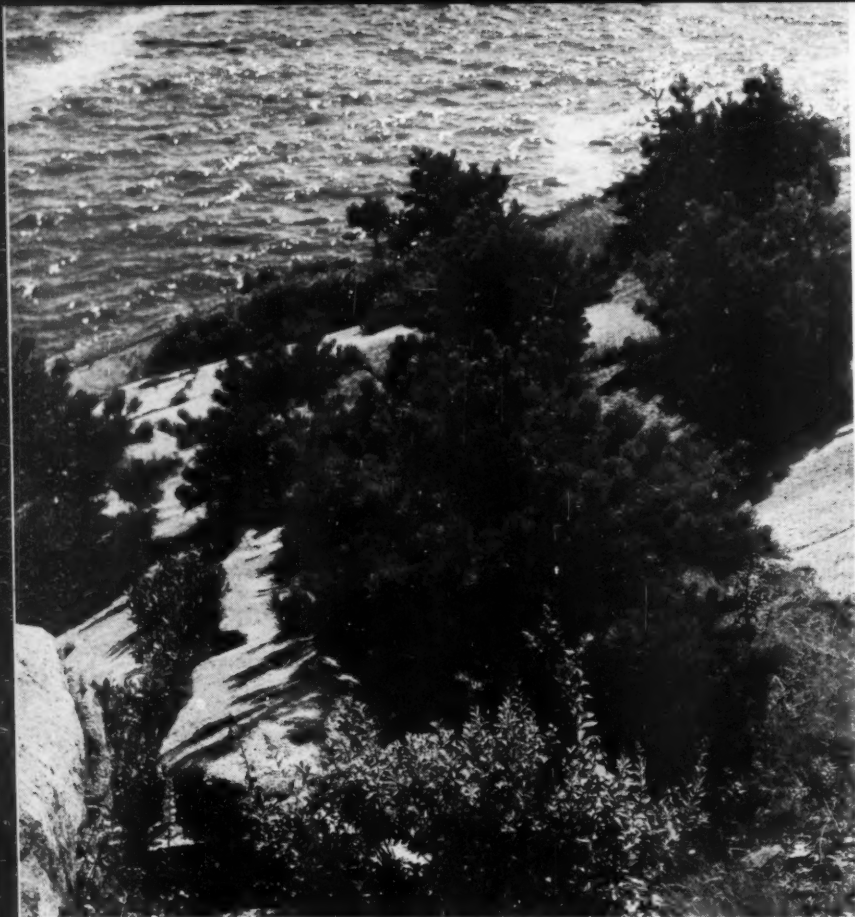
consists mainly of the area of mountains, south to the coast on the Eastern Side, and part of the mountainous area and part of the shoreline on the Western Side.

In the fall of 1947, following an exceptionally dry summer, a fire broke out near the village of Hulls Cove, approximately five miles north of Bar Harbor. The activities of this fire were well documented, and the reader wishing more detail can find ample material in the journals for October, 1947, under what became known as the Bar Harbor Fire. By the time it was declared officially out, nearly a month after its origin, the fire had consumed some 18,000 acres of various types of forest, farmland, and residential areas. Of this amount, approximately 10,000 acres were within the confines of Acadia National Park. It is the purpose of this article to observe some of the changes wrought by twelve years of natural reforestation on some of the burned areas, and to compare these with adjacent areas having escaped the conflagration.

Before the fire, large portions of the area later burned were forested with relatively mature stands of species of trees now found in contiguous areas. In this region, the mature forest growth, perhaps the climax forest, consists of spruce-fir complex. Represented in this group are the red spruce and the white spruce. Of these two, the red spruce is the more common except in the areas immediately adjacent to the shore, where the white spruce may locally become the dominant species. Also represented in this forest is the balsam fir in greater or lesser amounts in local areas. The pines are represented here in lesser numbers; however, numerous examples of white pine and pitch pine may be found. Less common are examples of red pine, and rarely a specimen of jack pine can be located.

Damp areas are inhabited by northern white cedar, eastern hemlock, American larch, and black spruce.

From the examples cited, it can be seen that a mature forest in this area consists primarily of coniferous species, containing mainly red and white spruce. When one of these mature areas becomes disturbed



Many conifers are represented on the island. They are particularly noticeable along Ocean Drive near Sand Beach and the southern limit of the burn near Otter Point

through the action of the wind blowing down one or more large trees, by the activities of man and his machines, or by fire resulting from natural or man-inflicted causes, a striking transformation of the forest species represented takes place. The area where the disturbance takes place abounds with many species of trees of which most, if not all, are hardwoods.

Before an attempt is made to describe this transformation from conifers to hardwoods, it might be well to examine some of the results of a forest fire of the severity of the Bar Harbor fire of 1947.

Much of the area burned during this fire overlies a highly jointed granite bedrock, covered in the lower valleys by amounts of glacial debris varying from several to several tens of feet in thickness. The slopes and rounded ridges of the mountains are relatively free from this mantle, and consist of barren granite.

Covering the skin of glacial debris in the unburned spruce-fir forest can be found a layer of organic and mineral soil varying in thickness from

a few inches to more than a foot. Where the fire was of sufficient intensity, much of this organic cover burned, leaving only the mineral sand. The fine-to-medium-grained sand erodes very rapidly from running water, especially on the steep, smooth slopes found under much of the burned area. Along the side slopes and rounded ridges of the low mountains, hikers frequently find burned snags, or stumps where the snags have been cut, with sprawling roots spreading over the rock surface frequently suspended a foot or more above the bedrock. Evidence of this sort indicates that in local areas more than a foot of soil may have eroded following the fire. Some of the sand from the steeper slopes collects in the lower joints in the granite, forming a base for the accumulation of new soil; it is now beginning to support mosses and some flowering plants.

In these small pockets of sand and organic material can be found specimens of three-toothed cinquefoil, mountain sandwort, and other flowering plants. To the delight of the many summer visitors to Acadia

National Park, one of the more common species of plants found in exposed areas is the blueberry. Growing in profusion, and producing immense quantities of large, juicy fruit, this plant supplements the diet of many campers and furnishes grazing material for multitudes of hikers.

Found among the blueberries, and gradually crowding them out of existence, many species of broad-leaved plants change the scene from one of desolation to one resembling a youthful hardwood forest. Within the zones where substantial regrowth has taken place, several species dominate the scene, supplemented by lesser numbers of several others.

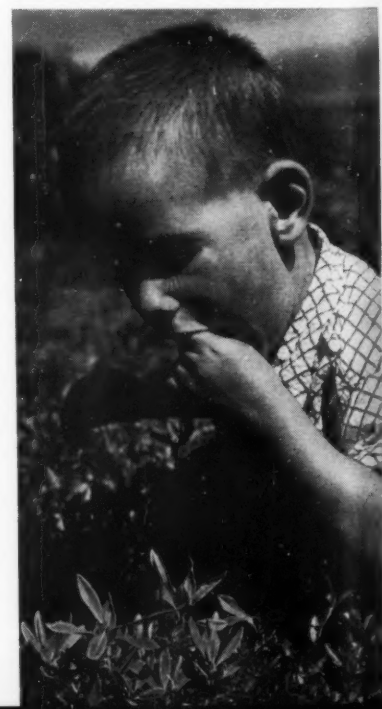
In many localities a birch-aspen complex forms the most common grouping of trees. These include the gray birch, white birch, quaking aspen, and bigtooth aspen. Within this same area, the fire cherry and staghorn sumac find room to dot the scene with red during much of the summer.

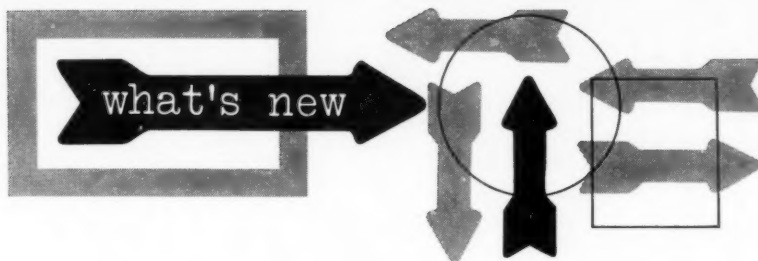
In several areas of the burned forest, regrowth consists primarily of red oak, the most common oak found anywhere on Mount Desert Island and the only one found on the Eastern Side. In many of the areas where red oaks have reproduced, few other species compete with them for space.

Growing beneath this rather dense profusion of hardwoods, the observ-

(Turn to page 53)

Blueberries grow in profusion and supplement the diet of hikers and campers





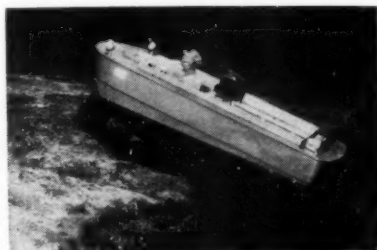
THE lively Texas Forestry Association has just issued Vol. 1, No. 1 of a breezy tabloid-size newspaper called *Texas Forests and Texans* "printed in Texas on paper made in Texas from pine trees grown in Texas." Concisely written and well-illustrated, this little "newspaperette" seems to be part of a trend now going on in forest and conservation circles. Ed Stout's *Bowaters Tree Farmer* is another four-page tabloid replete with recent news, informative editorials, and plenty of photographs. More recently, in Washington, D. C., Devereux Butcher has come forth with his *National Wildlands News*, which is already commanding a respectable audience. These tabloids have two very fine virtues: They are cheap to produce and easy to read. And they are a welcome addition to the conservation communications community.

SIMPSON TIMBER COMPANY of Seattle has announced plans for establishing a **forest products research and development laboratory** on a ten-acre tract in Overlake Park, near Bellevue, Washington. Ground-breaking will take place this spring with operation planned for late fall. The laboratory is Simpson's second major building project announced for 1960. Construction of an ultra-modern sawmill at Shelton, Washington, began last month. The new building will cover about 20,000 square feet. The structure will feature SIMPSON woods in the form of stressed skin plywood panels, folded plates, box beams, and plywoods.



Simpson Research Laboratory

Russell Lord, Rex Tugwell, and a number of others made a pilgrimage to Warm Springs, Georgia, in January to participate in birthday ceremonies in honor of the late President Roosevelt. The night before the group saw Ralph Bellamy play FDR in *Sunrise at Campobello*. The next day Mr. Lord, in an address entitled "FDR and Trees," commented, "Conservationists of all sorts are likely to be extremely single-minded zealots. Some want to preserve nothing more than wildlife and wilderness; others see the movement simply in terms of timber; still others burn most ardently only in crusades to net down topsoil on farms and ranches and cleanse our streams and rivers of silt and filth. From the very first, Franklin Roosevelt saw that all this was not a maze of separate programs, but all one . . ."



The Swamp Fox

The new **Swamp Fox**, a completely amphibious machine, has been announced by CONSOLIDATED INDUSTRIES. The **Swamp Fox** has a double hull of fiberglass, is styrene filled between the hulls, and has non-fouling tracks. There is ample space for five passengers or one half ton of cargo. These engines are available: the Ford 6 cylinder industrial O.H.V. with automatic transmission, Ford 6 cylinder Falcon O.H.V. engine with automatic transmission, and the standard 6 cylinder Studebaker engine with standard transmission.

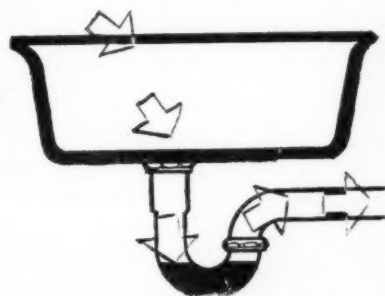
INTERNATIONAL HARVESTER COMPANY has introduced its new Inter-



International Drott T-340 Skid Grapple

national Drott T-340 skid grapple which will handle up to one-half cord of pulpwood per pass. This two-prong, 48-inch unit has a lift capacity of 4,800 pounds; a loading height of 9 feet, 10 inches, and a forward reach of 7 feet, 4 inches.

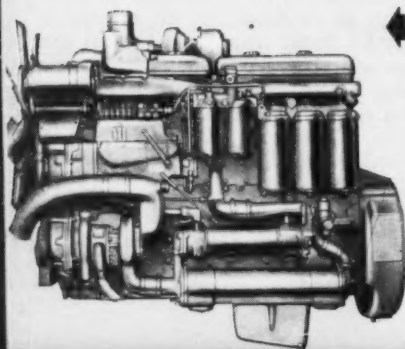
Louisiana's 1000th Tree Farm will be dedicated in Mansfield, Louisiana, this month amid an unparalleled "show of strength" of forest industry by the LOUISIANA FORESTRY ASSOCIATION. A one-day festival is planned to celebrate the event.



Prod Liquid Drain Opener

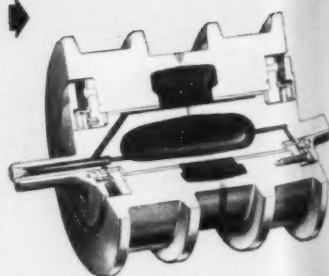
Prod Liquid Drain Opener works quickly to open clogged drains. Prod is odorless and will not freeze or harden in the drain trap or line. Most drain blockages do not occur in the drain trap itself but in the horizontal line leading from the trap to the 4" line in the basement. For further information write PRODUCTS CHEMICAL COMPANY, 3721 North Glebe Road, Arlington, Virginia, or see your local hardware dealer.

ONLY THE NEW TD-25 GIVES YOU ***BUILT-IN*** Planet Power



Big power "plus" under the hood of the new TD-25 is the new direct-start, 6-cylinder International DT-817 diesel engine. Dual valving makes this high-torque engine a "free breather"—provides for peak turbocharging efficiency, to deliver full load performance from sea level to timberline!

Dual-protected TD-25 Dura-Rollers provide the thickest-shelled track roller design in the crawler industry. King-size lube reservoirs and seal-protecting pressure-relief passages combine to make Dura-Rollers the track rollers you can power lubricate without affecting seal life or efficiency.



r-steering..Hi-Lo power-shifting

NEW 230-hp "25" comes standard-equipped to make full-load turns; full-speed cycles!

Here's how you get full-load turns and full-speed cycles from a king-sized crawler—for full profit logging!

As standard equipment at no extra cost, the new 230-hp International TD-25 gives you combined, built-in Planet Power-steering and Hi-Lo, on-the-go power shifting! And you get this basic, built-in design advantage in your choice of torque-converter or synchromesh model!

With this and all of its other big advantages, the TD-25 can outearn other big rigs up to 50%—skidding king-sized log loads or benching out skid roads!


No "dead-track drag"

No "gear-shift lag"

Planet Power-steering gives you full-time "live" power and traction on both tracks, to make full-load turns—and to eliminate load-limiting "dead-track drag." And Hi-Lo on-the-go power-shifting instantly matches power to conditions to prevent load-losing "gear-shift lag."

Hi-Lo power-shifting makes the TD-25 the industry's only 4-speed torque-converter crawler and the only one with load-matching efficiency-range control. In the synchromesh transmission "25," the Hi-Lo planetary system gives eight speeds forward and reverse. Either model gives you cycle-speeding, up-or-down, on-the-go power-shifting with "finger-tip" ease!

Power-shift and power-steer the new "25" with king-sized loads—around curves, upgrade, anywhere. Prove what it means to command full-time, full-load ability to outearn clutch-steered king-sized crawlers, up to 50%. Measure all the "25's" standard equipment *extra value* features! See your International Construction Equipment Distributor for a demonstration!



Even though "out-rated" 105-hp by a clutch-steered king-sized competitor, this nimble TD-25 proved able to outwork "the big one"—benching Oregon skid-roads! Reasons: the "25" moves faster, forward and reverse—turns quicker, keeps the full load on the move—does no "bank-nosing" or slueing! Simply shift the "25's" bank-side track to high range, the other to low—for slope-hugging, full-bite benching!



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A COMPLETE POWER PACKAGE: Crawler and Wheel Tractors... Self-Propelled Scrapers and Bottom-Dump Wagons... Crawler and Rubber-Tired Loaders... Off-Highway Haulers... Diesel and Carbureted Engines... Motor Trucks... Farm Tractors and Equipment.



Forest highways cross and recross the great mountain ranges of the West—the Rockies, the Cascades, and the Sierras

By LAURENCE I. HEWES

*Former Chief, Western Headquarters
Public Roads Administration*

WESTERN FOREST

ONCE I took a Congressman to see a forest highway building in Wyoming. One could see his bewilderment. It was early November and raining. Far down in a gulch "bulldozers" were spreading earth over a long culvert. Trucks backed up through the mud to the power shovel. Nonchalantly, that master of levers—the shovel runner—nudged a huge wet boulder off the high bank into his dipper, swung it to the waiting truck that jumped under the sudden impact. With a starting roar out went the load to the "fill" in a sharp side canyon. It is on a steep mountain slope where one huge rock wouldn't "catch." So it bounded from ledge to ledge, hundreds of feet below. "This looks almost hopeless," said my visitor, pointing to the medley of partly finished operations. "How will that mass of rocks as big

as trunks ever make a smooth road? Where is all this water going to be let out? Won't that mountain keep right on slipping down? Will that retaining wall support a road along this cliff?"

The superintendent smiled. "We'll drive you over a smooth finished grade here within six months, sir. Just so the weather is with us."

There indeed comes a day when the last surface finish is on—the carpet of asphalt with hard rock chips. Then the "cleanup." All the slopes are trimmed—all the stumps and roots are burned. Traffic goes through smoothly, at almost any speed. "What a nice place they found to put the road," said the middle-aged city woman as she drove over a new graded road near Superior in Arizona. The Resident Engineer looked at her—that grade had

been necessary in spite of all the alternates, and all his efforts to reduce its cost had figured \$150,000 for less than a mile!

On finished forest highways you will observe the latest designs to eliminate unsightly scars and to reduce destructive erosion of excavated slopes. The Forest Service is diligent in preserving scenic timber along these highways. They permit no clear cutting, only strictly controlled selective cuttings so that your trip is always through pleasant frontage.

Years ago when forest highway construction began, western conditions of travel were among the world's worst. It was difficult everywhere, and through many national forests it was impossible. Along the Oregon coast a forest road was actually missing—a road to take traffic

off the beach north of Waldport. At that point, incoming Pacific tides sometimes caught hopelessly stranded cars. Even in 1921 motorcars were exploring out-of-the-way places. One automobile came just ahead of me to this Oregon beach over a narrow plank trestle. When the wife of the driver refused the hazard and started walking, her anxious husband, turning around to see how she "was making it," wrecked the car. The road that now replaces this hazard is a splendid modern forest highway.

The Mt. Hood National Forest in Oregon is on the south bank of the great Columbia River. Thirty years ago there was no road up this scenic river. Then the state highway department literally "hung" one along the basaltic cliffs. Today there's a forest highway section through here, and it's part of a splendid interstate highway. It includes the famous "Tooth Rock Tunnel" with its warped masonry arched portal. This tunnel runs through a giant piece of mountain fallen from the high range 2,000 feet above. I watched the contractor, the late Sam Orino, taking rock out of this short tunnel. We were both glad when he "holed

Down the Klamath River in California, an early forest highway is still unfinished. It runs for 133 miles from the mouth of the Shasta River through virgin country toward the coast lumber town of Arcata. The original survey crew built a boat to carry supplies, men, and instruments. There was no trail along the river south of Happy Camp. At Orlean's Bar they traded the boat for pack horses. It rains in this area—when construction engineers moved camp in the rain years later, the only dry item in the outfit was the chief's baby girl, who rode with him protected by an umbrella. There were rumors of gold in the river bars of this remote region; one native father's wedding present to his only son was the privilege to pan gold for a week on the family bar!

In Wyoming, a road out of famous Jackson Hole must run over Teton Pass to the railroad at Victor, Idaho. Snow avalanches still threaten this road. For years Public Roads engineers have been "spotting" the slide areas by the fallen aspen trees swept by the rushing snow pack. I've walked this winding road to check the reports on the ground. Its new safe location still awaits—it may be

through the Ocheco National Forest, but a forest road was soon built, and it is now to be a main highway. On my first trip into the isolated town of Mitchell in a buckboard we forded swollen Ocheco Creek repeatedly. One man thought he had to jump to avoid a ducking, and for some time he was marooned on a rock in the swift current.

"You see," explains the cattleman in eastern Oregon, "these forest highways were built first to get travel through. Sure they were primitive. But they aren't so now, due to the Federal Highway Act of 1921 with new money and the federal aid highway system. Of course, the only way for the system across the western mountains was through the national forests. So these federal highway sections in the national forests became class one forest highways—about 5,100 miles of them. Other state highways in the forests became class two and boosted the mileage to 10,000. Uncle Sam had got himself a real job of road building."

Indeed the main forest highways do cross and recross the Rockies and the Sangre de Cristo, the Cascades, and the Sierra. They carry important through traffic—some of it across

ST HIGHWAYS COME OF AGE

PART II

through," because the tunnel blasts constantly threatened the Union Pacific trains running through another tunnel below in the same mountain "fragment."

Early forest highways surely were needed. In Colorado, in La Plata County, there was no way across the mountains between Durango and Silverton. The highway job proved to be literally high adventure. It's in the San Juan National Forest where the Molas Divide is above 10,000 feet. In a flu epidemic in the winter snows, men on the Public Roads working crews died there on the mountain too fast to be removed. They had to be buried near their jobs in graves dug by their own road equipment. The next year Navajo Indians finished the job but refused to live in tents and built their own "hogans."

that snowsheds like those of our railroads will have to be built.

In Idaho, Gibbons Pass above the town of Salmon opens into Montana. Here, because of the small annual funds and tough construction, more than 10 years was required to get the long ascending mountain road opened. It is a part of U.S. Route 93 and now carries traffic north through the old ghost town of Gibbon into the famous Bitterroot Valley and to Montana's Missoula. To the south this U.S. route leads to the grand scenery of Idaho's Stanley Basin where antelope and mountain sheep are found near Sun Valley. Incidentally, in 1947 I saw the Lewis and Clark marker above Salmon to commemorate their side trip over the pass into Idaho.

In central Oregon beyond Prineville there once was only a trail

the nation. Five hundred miles of forest highways are on the newly designated Interstate Highway System. These forest highways run up fertile river valleys in Montana where the nearby forests whisper to the traveler. Thirty-four of the routes lead to a dozen national parks of the western states. Into Yellowstone Park alone go seven forest highways with a combined 215 miles. These park entrance roads lead down the Hoback River and through Jackson Hole in Wyoming, along the upper reaches of the Snake River into the South Entrance, up the Shoshone River in Wyoming, and into the East Entrance across Sylvan Pass. Up the West Gallatin and Madison Rivers in Montana run other forest highways to west Yellowstone. Beautiful Cave Falls in south Yellowstone is reached by a

short forest highway up the Bechler River east of Ashton, Idaho. North of Ashton is also the longest forest highway route into Yellowstone. It follows the Snake and Buffalo Rivers 55 miles to the west Yellowstone entrance through some of the best trout fishing country I've found in the West.

Many forest highways afford recreation in its truest sense. It certainly was a grand feeling to me to escape once from the summer heat of Imperial and Coachella Valleys in California. Dates were ripening there at 110° in the humid groves, but we found quick relief by the so-called Palms to Pines Forest Highway. Our car climbed the bare mountain in about two hours to the cool heights of Idyllwild. On this mountain in the San Bernardino National Forest, which is over 6,000 feet above the sub-sea level at Idaho and the Coachella Valley, the night was so cool we needed blankets. "It's always cool like this," said the forest ranger.

The people of Los Angeles, San Bernardino, Riverside, and dozens of other southern California cities seek recreation by driving over forest highways that take them high up Waterman Canyon to "The Rim of the World," and likewise to the Angeles Crest beyond Mt. Wilson. They are proud of these forest highways in the south. They'll tell you that in winter even the southern California mountains are snow areas where skiers from Hollywood and other towns find excellent sport. Farther north skiing is the same lark for the hardy western youth, be it in Yosemite or on Mt. Hood or even on distant Mt. Baker. Week-ends will crowd the forest highways with cars using chains in the snow. The problem of parking areas for this winter business requires special attention and careful design. Cars swarm from Portland to Mt. Hood's famous Timberline Lodge for the nearby ski run—and they have to find parking. Winter holds no terrors for these Portlanders—they motor by thousands over the Mt. Hood Loop Forest Highway. Out of Seattle and Bellingham and Vancouver, B.C. recreation seekers also flock in all seasons to the Mt. Baker area over the forest highway that bears its name. The snow conditions and weather are announced regularly in the newspapers. So hundreds of motorcars seek parking places along the forest highways. I am always impressed by the high spirits of these winter sports folk. They have their

social life, too—a cup of hot chocolate or tea in the lodges before departing is usually the rule.

But perhaps proudest of all ski runs is Denver's Berthoud Pass area. Said the Public Road engineer in Denver, "In 1920, it took me three weeks to get the first steam shovel up there to Berthoud. There were practically no roads on which we could 'walk' it along. We had to chop our way up the mountainside. In places we 'fired up' the shovel and our own turkey track." It's a 10,000-foot altitude at Berthoud Pass where the Denver winter sportsman finds his runs. And now it's a fast trip of only 56 miles on U.S. Route 40 west of the city. The Colorado State Highway Department keeps the forest highway free of snow throughout the winter. The highway runs directly through this win-

Redwood Library Established

A repository for articles, books, photographs and other information about redwood (*Sequoia sempervirens*) has been established at the Redwood Ranger Station, U. S. Forest Service, Requa, California (Del Norte County).

The American Forestry Association has forwarded to the library 28 volumes of *American Forests* formerly in the collection of Dr. G. Flippo Gravatt, retired expert in tree diseases in the U. S. Department of Agriculture. These volumes cover the years 1913-1922, 1928-1934, 1940-1943, 1948-1953, and 1956.

Anyone having missing copies of *American Forests* or other material about redwood available for donation, please contact District Ranger Ted F. Hatzimanolis at the above address.

ter sports paradise and it also carries big traffic in summer.

Over thousands of miles of forest highways throughout the far West, summer vacationists from almost every state find quiet recreation in cool high camp grounds. In roadside camps and parking areas the weekend vacationer's car waits while he whips nearby waters for mountain trout. Boys' clubs in the local cities annually send relays of youngsters to the camps along the clear waters of mountain streams. Here for two or three weeks or longer the city youngsters live in the wilds in unforgettable national forest environment.

As fall comes on, the fishermen yield to the hunters—especially the deer hunters. They were due in a few days in the Kaibab National For-

est in Arizona, north of the Grand Canyon, when I inspected the forest highway south from Fredonia, Utah. This splendid recreational forest highway leads south 74 miles to the national park. It runs through clean forests of spruce and western yellow pine that, in October, were shot through with flaming aspen. Here is a paradise for deer hunters. On one previous trip during the construction of the national park highway we counted over 600 hunters while motoring through the 8,000-foot high meadows. Here also, if one is lucky, he may see the elusive white-tailed squirrel (*Sciurus kaibabensis*), which nobody may kill. He moves about while snow covers the forest, and under his white tail he can hide from his hawk enemies. Once my car unavoidably killed one that jumped into the road. He was sent to Washington, but only under permit from the forester; no white-tailed squirrel dead or alive can be taken from the Kaibab!

Actually few forest highways have been built solely for recreation, and those few often with generous state co-operation. Some older recreational roads, however, are now congested with weekend motorists, and demand for new routes constantly increases. One becomes convinced that high snow-covered peaks of the Cascade Mountains, such as Mt. Adams and Mt. St. Helens in Washington and Mt. Shasta in northern California, cannot permanently remain without access for the increasingly eager motorists of the populous west coast states.

Congress stipulated that national forest highways should "serve the forests" and they certainly do: 1) They make fire protection possible; 2) They carry big through traffic; 3) They open areas to recreation; and, above all, 4) They supplement orderly timber cutting—timber harvesting now on a "sustained yield" basis.

True, there also must be additional service to these national forests and so there is—by the lowest or class three forest highways. Further service is furnished by "development roads," tributaries to the forest highways. Such tributary roads have also been under construction for years. As timber resources outside the national forests diminish, these "development roads" become more important than ever. Now they must be built on higher standards, since they must serve permanently for timber hauling.

During World War II, billions of

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Adaptable for fast handling of sawlogs, pulpwood, and palletized materials, the versatile John Deere Loader provides great savings over hand labor or inadequate single-use equipment. Features such as high maneuverability and single-stick crawler control together with remarkable fuel economy earn a place for the John Deere Loader in pole yards and saw mills as well as at the landing. Diesel or gasoline power.

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feet of western lumber were cut for construction of barracks, storage warehouses, South Pacific uses, and for crates and boxing of machinery and other war equipment. As I motored along almost any far western forest highway during the war, the constant stream of log trucks made travel somewhat of an adventure. Sharp curves in a road need care in driving when log loads are 50 feet or more in length! From California alone came two billion board feet in logs. Under certain conditions, "overloading" of trucks had to be permitted, and the forest highways suffered. But they rendered splendid service—an emergency service that helped pay off the government investment. Now in Portland and Seattle and Coos Bay and San Francisco I find that logs for the new housing and for the European recovery program are coming out of our national forests. They come especially from these Pacific Coast states. They come out over timber access roads at the rate of three or four hundred million board feet yearly. Then forest highways carry this load on to the mills. "Speaking of War Service highways," said a mining man in Idaho, "most of our tungsten and antimony came out from central Idaho mines over forest highways."

Anyone motoring west along the forest highways soon realizes the constant menace of forest fires. Signs tell you to be careful—to crush your match, not to throw out burning tobacco, to extinguish your camp fire to the last spark. Yet fires occur. Not all are man-made. Some start from lightning. In the dry summer, in many areas, the forests are veritable tinder boxes. Then there occur "dry lightning storms." The national forest lookouts spot the smoke. The Forest Service must operate then as a vast fire department, and it needs fast roads. Over forest highways and development roads and the access and protection service roads must go quick fire defense—defense with special motorized equipment and truckloads of men. Progressive opening of the national forests to motor traffic is doubtless a certain fire hazard. Typical are the roadside cigarette fires. I have found the smoldering area under surface litter with a telltale cigarette butt in its center. No smoker who has had to help fight the resulting blaze when it roars on with rising wind would ever repeat his carelessness. I once rode for miles through a fire in the Crater National Forest in

Oregon. Old "snags" or dead trees were crashing down on the north side of the highway. The forest ranger at the wheel was alert, and the regional forester and I were, too—we had a free hand on the car doors ready to jump if a blazing tree fell across our path! Dead "snags" are unlit torches that can catch fire in electric storms. One blazing snag fires another and in the updraft of narrow canyons there is soon a blazing tempest.

Ask the construction engineers of Public Roads how the trash from clearing of trees and brush for construction of highways can be burned, and they will tell you that it is done when humidity and protection are most favorable—preferably in the winter or late fall when the rains come. Always there are stringent rules. Pumps, hoses, and men under supervision of forest rangers are at hand. Men of the construction and survey crews are subject to draft to fight fires that escape. Power shovels must have spark mufflers. Debris piles must be in the center of cleared areas. Sometimes trees and brush for 75 feet into the adjoining forest are drenched for hours before burning begins. In short, it's a professional operation that seldom goes wrong.

It may sound dramatic when a highway requires 25 years to complete. But over White Pass in the Cascade Mountains in Washington there is a forest highway surveyed about 1920 that won't be driven through the last five miles of ledge rock before 1950. It's called the "Randall-Yakima" highway. It is going to connect the rich Yakima Valley with the populous area west of the high Cascade Mountains. It is 72 miles long. Traffic already has moved over part of it to go around Mt. Rainier inside the national park. So tough are some of the miles I've seen built through volcanic rock that it has been let to contract in several pieces less than a mile long—some of the miles cost over \$200,000. Washington, like other western states, has only limited annual forest highway funds which were interrupted during World War II, so this Randall-Yakima Highway is a patient job that will have lasted a quarter of a century. Lettered sections of this tough highway job now run to the end of the alphabet and even section "Z" won't finish the job! Incidentally, it's forest highway No. 13.

Up at Lewiston, Idaho, you will hear plenty about the so-called

Lewis and Clark Forest Highway, where federal convicts once worked. It's another veteran of road campaigning in the West. It runs 101 miles up the Clearwater River from Lewiston to the Lochsa and on over the Lolo Pass into Montana. Its long miles are expensive miles—many of them in tough "box canyons" of sheer steep granite. Lewis and Clark came down here along the Lochsa River more than a century ago, but several railroads that later ran surveys on this water grade route have never had the courage to finance the expensive construction. Since about 1920 some work has been done every year on this forest highway. Federal prisoners have tried it. WPA men took their turn for a season or two. Then came Japanese internees—all did their bit, but against the granite of the Bitterroot Mountains it wasn't enough. The states of Idaho and Montana have devoted state funds and federal aid road funds to help out. There still remains 45 miles of wilderness work yet to be done before the people of Missoula, Montana can travel to Lewiston and on into the rich Palouse country of Washington.

On the long hard forest highways all over the far West, Public Roads engineers have gone in year after year to resume their jobs. Some have married mountain girls. Their babies have been bathed in mountain streams. Their children have grown up in far away camp tents. They have come to know the lives of the native folk. At times they have been threatened by disgruntled landowners within the forest areas. Once where a forest highway had to cross a surly man's field he planted dynamite in a glass jar where it could explode when work began, but it was found in time. A favorite maneuver by some of the mountain hermits has been request for damage to mining claims. The highway engineer must handle all such local contacts with care and diplomacy. Even then there are strange complaints from far-off pioneer folks to their congressmen! Once I arrived at headquarters of a forest highway job just after a "shootin'" quarrel in which one man had been killed and another had received a shot through the neck. The row had started with an argument as to which of two wives of the contractor's men knew how to bake the better bread—with that and some bad bootleg liquor!

Any story about the national forest highways of the West must include Alaska. Here on the north

Manual
Edition

FOREST FARMER

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THE FOREST FARMERS ASSOCIATION

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FULLY
ILLUSTRATED

Pacific coast are two large national forests rich in timber and pulp resources. They are the Chugach on the Kenai Peninsula north of Seward and the Tongass in southeast Alaska. In the panhandle around Ketchikan are miles of good forest highway connecting adjoining satellite towns. North from Resurrection Bay near Seward runs the forest highway connection to Turnagain Arm. Along

the famed Lynn Canal goes the so-called Glacier Forest Highway from Juneau. Here the tourist fortunate enough to bring his automobile can motor along in sight of our own glaciers.

And speaking of Alaska, it was some of the Public Roads' 1600 engineers who had been building forest highways for a quarter of a cen-

tury who, in 1942, moved up to build the 1500-mile Alaska Highway. Their adventures are another story. But it was fortunate indeed that Uncle Sam had a veteran crew, many of 20 years and more experience in western mountains.

Note: Larry Hewes, a nephew of the late author, is chief of the Forecast and Economics Studies Group of ORRRC.

A Bold Step Forward

(From page 17)

Mike Lazara has a knowledge of forest fire cause and prevention gained in six years as director of the Keep Washington Green program.

A high degree of technical capability is not all the program offers. There is also a unique feature which assures the claimant of a prompt and sure settlement following loss. The amount to be paid in case of loss or damage is specified at the time the policy is issued. Then, if a fire should occur, the claimant recovers his loss almost immediately.

Here's how this is done: Before a policy is issued, Greenacres foresters make a thorough field inspection of the property to determine the age of the trees, type of trees, how well stocked the area is, and the growth potential of the site. Species are classed as either hardwood or conifer. Insured values assigned from the field work will vary from as little as \$9.00 per acre for widely scattered seedlings on poor growing sites to as high as \$303 per acre for 70-year-old trees on a good growing site. The policies are written with a deductible clause, either \$200 or one per cent of the insured value, whichever is greater. This amount compensates for the administrative work necessary for very small claims.

The value thus assigned, less the deductible amount, is what the claimant will receive per acre should that stand be struck by fire. In stands more than 40 years old the value is for the portion of loss by fire damage that the landowner is not expected to recover in a salvage operation. Salvage rights are retained by the landowner. This is important, for it means that the landowner will not pay premiums on the total value of his stand, but only on the amount which he would not be able to recover from salvage.

In a stand less than 40 years old, the assigned value allows for a high percentage of loss recovery, enabling the landowner to re-establish the stand and, in addition, to recover a

substantial portion of the actual dollar loss. A good timber management plan will greatly increase the insurable value of a stand. If improvements such as weeding, thinning, and pruning have been applied without the recovery of merchantable products, the value may be increased by as much as 50 per cent. If the stand has been established artificially, the insurable value can be increased by 50 per cent up to age 20. Producing Christmas tree lands that have been currently cropped for at least three years can be given an insurable value up to three times that of a comparable non-producing stand.

Under this system of pre-determined values, settlement after a fire depends only on the determination of the acreage lost in each stand. There is no need to wait until the following growing season to assess the loss on the basis of damage to the growth of the stand.

A leading factor in the decision to offer forest fire insurance to northwest landowners is the marked drop in acreage loss and fire frequency that has occurred since 1940, the year the Keep Washington Green program was born. Since that time, public education in fire prevention, coupled with tremendous strides in the detection and suppression fields have reduced average yearly acreage loss by 80 per cent. The yearly average number of man-caused fires has dropped 30 per cent in the past two decades. In 1959, 466 man-caused fires burned only 816 acres of state and private land in western Washington.

This probability of fire occurrence is given careful consideration in determining the premium rate for a given property. Beginning with the basic rate of \$.50 per \$100 of insurable value, additions or credits are applied according to the presence or absence of factors affecting fire probability, rate of spread, and ease of suppression. Remember,

this rate is applied only on the pre-determined value expected to be lost in case of fire. The landowner recovers the value of his stand above this through retention of salvage rights.

For example, consider a 60-year-old stand of Douglasfir of medium site and medium stocking. If the stand had a total value of \$20,000 and the assigned insurance value were \$10,000, the rate would not be applied to the other \$10,000 expected to be recovered in a salvage operation. In this case, the total premium could be expected to run between \$40 and \$60 per year, depending upon the premium rate applied. In effect then, the landowner can expect to recover fully from fire loss by combined salvage values and insurance coverage, and yet is paying premiums only on values which would be lost to the fire.

In order to be eligible for the base rate, the property must be a certified tree farm, as well as having current slash clearance from the Washington State Department of Natural Resources. A fire chargeable to the owner within the last 10 years will add to the base rate.

Other factors given plus or minus weight include existing recreational problems or public travel, road and gate systems on the area, proximity of railroads, and nearness to fire-fighting headquarters as measured in travel time. Stocking, number of snags, and topographic features also enter the picture.

From start to finish, this new program in the Douglasfir region should mark a new era in second-growth management. Already, expansion of the program to other western states is being given close consideration. Policy limits have been raised to make possible coverage of larger blocks of timber.

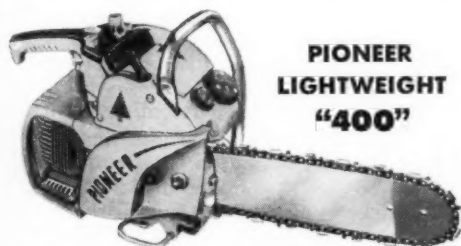
It looks as if forest fire insurance in the northwest is here to stay. And why not? Any way you look at it, it's good business.



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Reading About Resources

(From page 14)

have seen between covers. Wherever there is this abundance of information, there will also be abundant opportunity for opponents of the author to take issue with his scholarship. No matter. The book is true to King's own convictions, and it will be a valuable reference for students of all convictions in the years to come.

The Case for Farmers is primarily useful in dispelling many misconceptions regarding the economic position of the American farmer and the nature of the various programs designed to assist him—or designed, at least, to have him think he was being assisted. The integrity of Patton's tight writing will give fresh insight into his particular viewpoint to all readers, of whatever persuasion. It will help opposites to better understand one another. It throws a strong, clear light on the battlefield, so that in the future there may possibly be less battle and more constructive negotiation.

Books such as these two prevent conservationists from forgetting what strenuous political overtones there are to all earth-problems. King and Patton represent one side of these overtones, but we may rest assured that there is indeed another side, and that between the two they make a rich cacophony which reverberates from headline to headline.

A completely different approach to the politics of resource management is offered in *The Forest Ranger, A Study in Administrative Behavior*, by Herbert Kaufman (Johns Hopkins Press, 1960. \$5.00). This Resources for the Future project is a practical study-in-depth of the problems of the man on the scene, charged with the implementation of policy, in contrast to the man who is sometimes very far back from the scene, conceiving policy.

Kaufman has pulled no punches, and spared no brain power, in dissecting the role of the forest ranger. Part I takes a look at the disintegrating forces in Forest Service administration, and Part II at those that integrate the effectiveness of the personnel. Both sections are constructive, and no one stands to gain so much from this study as do the American people themselves.

Only one really serious question comes to mind in reading this book: that is, the effect of essential integra-

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WHINE IN
2-WHEEL
DRIVE!

tion of far-flung administration upon the individuality of the participants. Has our society gotten so big, and so complex, that the individual must now, for the survival of society itself, submerge himself in an encouraged, if not actually dictated, conformity? This appears to be the case, and Kaufman's brief section, "Voluntary Conformity," should be required reading. What such a price for efficiency, and hence for survival, will prove to be in a hundred years is a moot but frightening point.

Landownership

(From page 6)

officials said this would enable industry to control stumpage prices. The consensus, however, appeared to be that the acreage desired was insignificant compared to the seven million acres now in state-county ownership. They said it is more important to stimulate utilization of all the allowable cut under sustained yield management. The local economy is considerably short of such a goal at present.

A second unexpected objection came from an industry man who opposed land exchanges between public agencies on the plea that intermingled ownership helped spread the risk of damage by fire, insects, and diseases. Furthermore consolidation of land in large blocks gave the owner too much control. He recommended the state offer its land for sale before considering an exchange with the federal government. This proposal was contrary to the general thinking of those present.

Although discussions were spirited throughout the two-day session, everyone praised Dr. Dana and his associates for their keen insight and clear presentation of Minnesota problems. Many urged prompt publication of the findings and recommended that the report be placed in every high school and college library in the state.

In North Carolina, J. Edgar Kirk, assistant director, Department of Conservation and Development, proclaimed the third phase of AFA's landownership series "a major milestone" as he opened the hearing.

"This analysis," he said, "will provide a yardstick for future planning, particularly in programs involving the small owner. This is a basic need."

Mr. Kirk then challenged the Advisory Committee and the Project staff. "This group has within it the

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potential to do something constructive about a problem that has plagued us for decades."

In rapid succession the advisors then identified the problems as: 1) getting the state's 266,000 small owners to manage their woodlands more productively; 2) evaluation of Soil Bank, Agricultural Conservation Program, and other assistance programs; 3) protecting watersheds so there will be adequate water for future industrial developments; 4) acquisition of watersheds by municipalities; 5) zoning to protect potential industrial sites and future recreational needs; 6) providing an adequate system of state parks; 7) correlation of public hunting with private forest management, and 8) investigation of adverse possession laws.

Strangely enough, no one seemed to think that property taxes in North Carolina were of any great concern in forest management. Several people, however, pointed out emphatically that the present methods of leveling inheritance taxes frequently forced liquidation of managed forests. Administrators must secure cash to settle an estate, and sale of the standing timber usually is the

easiest way to secure it. Creation of a trust to protect income-producing property would be a better method.

Dr. C. F. Korstian, former dean, School of Forestry, Duke University, reminded the advisors of his 1942 study of private forest management. "Small woodland owners suffered from the poorest management then," he said, "and they still are the least productive. *This is the most important forestry problem in North Carolina today.*"

A nodding of heads throughout the audience endorsed his statement.

The North Carolina project has been made possible by a grant to AFA from the Mary Reynolds Babcock Foundation. Co-operating organizations are the North Carolina Forestry Assn. and Forestry Council, North Carolina State College, Duke University, State Department of Conservation and Development, Institute of Government, Forest Service, and the Soil Conservation Service.

Kenneth B. Pomeroy, chief forester of The American Forestry Association will direct the project with assistance by Dr. James G. Yoho, professor of forest economics at Duke University.

The Golden Aspen

(From page 24)

whole hillsides are covered by the beautiful gold, dotted here and there with a bright red tree. Thousands of nature lovers of the Rockies take to the hills with gladness in contemplating the bizarre and brilliant foliage. The coin-shaped leaves are more brilliant than those of any other tree and shine for miles.

In the spring, it pours forth tassels or catkins, thus earning it the name of "necklace tree." The similarity of the aspen to the willow catkin is remarkable, and on a warm day the tree blooms "burst" with an audible sound as the flower opens. The foliage of the aspen is a lighter green than the trees around, and the leaves quiver like sparkling water that twinkles with the highlights of the sun on their lighter undersides.

For centuries, the aspen has been identified by the way it moves. Father De Smet, an early French missionary to the Northwest, related a superstition that this tree furnished the wood of the cross at Calvary, since which time it has never ceased to quake. In reality, the leaves of the aspen are hinged upon leafstalks, longer than the blade and

flattened contrary to the plane of the blade, with the result that the leafstalk acts as a pivot and the leaves cannot but go into a shaking panic every time the slightest wind ruffles down the canyon. Other trees do rustle, but few of them have the right-angle pivot of blade and stalk.

The deep pits and long slashes on the snowy bark have been put there by animals such as deer, elk, and occasionally bear. During the severe winter, grass is covered by snow, and deer and elk bed down under the trees. As the snow gets packed, it elevates the feeding height; during the extreme of winter, the aspen will bear terrific barking by starving animals. In the higher country, however, the markings are rather minor, put there by the rubbing of antlers of deer and elk. The scars are old if the rims are black and hardened, or new if they are green and dripping with sap. Sometimes bears are prompted to indulge in clawing trees. Some think it is to sharpen the claws, while others say it is to dull them.

The beaver prefers the aspen to all other food, for the inner bark

contains the cambium layer much loved by the plant eaters. For beavers, the aspen grows conveniently by streams. With his sharp teeth, a beaver can fell the tree and skid the poles to his own destination, often creating canals by which means he can float the logs to any area he desires. In the early days of the West, beaver was trapped until it is a marvel the species was not annihilated. Toughened and weathered trappers hunted for aspen groves in order to trap the beaver by setting an aspen stick in the breach of a hole in the dam. The beaver would seize the stick to repair the break, and the trap would fall on his leg, carrying him to the bottom. In evenings around campfires of aspen logs, one could have seen the faces of Kit Carson, Jedediah Smith, Beckwith, St. Vrain, Bridger, Ashley, and the Subletts, recounting their exploits and their escapes, oft describing the forests of aspen where the beaver dwelt most plentiful.

In the black velvet of night in late summer, the stars glitter and the mercury drops lower and lower. By morning, all the blades of grass are silvered with a rime of light yellow. A mistaken idea abounds in folklore that the first rimes of frost bring out the golds or carotene coloring in the groves of aspen. Actually, the turning process is a slow one, sometimes commencing well before the end of August about six weeks in advance of killing frost. The longer the postponement of freezing, the longer the sugars will form color pigment. These aspens are creatures of habit, for in the late summer chlorophyll synthesis ceases and residual colors begin to appear; with each cooler night, the brilliant yellows and reds come to their prime. The clock of their year is running down, and before winter comes they put on their last blaze of glory.

The golden glory rains tranquilly down, for once the work of the leaf is ended, it is a liability to the tree. A special separating layer contained at the base of the stem thrusts the leaf from the stem of the tree. Often, after several frosts, a thin sheet of ice extends through the separating layer; after sunrise the ice melts, and all at once a shower of falling leaves drops to the ground below without the slightest quiver of a breeze. Gone are the actors, the dancing, shimmering, rustling leaves—the leaves which have built in the hearts of all nature lovers a special place with their particular golden charm.

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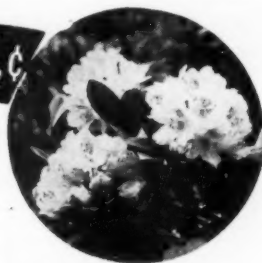
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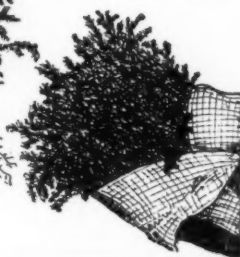
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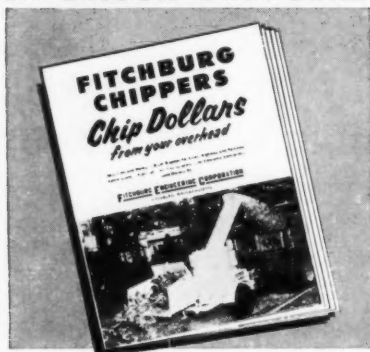
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not strong enough for structural purposes, the tree will never be of great value to the lumberman. This is more to its good fortune, for it will never be scoured to eradication. However, the pioneers, utilizing the raw materials at hand, did build cabins out of whole aspen logs, as well as furniture and kitchen utensils. The wood is quite tough for posts and snake rail fences, and has even carried telephone wires. The wood is ideal for excelsior, which is in demand for making

sound-proof wallboard. The fibres of aspen are mixed with spruce pulp for book and magazine papers, a cord of aspen yielding about 1,000 pounds of pulp.

So what seems a shallow-rooted and short-lived tree, forced out like a vagabond by other more highly regarded species, proves to have much value and a very special charm, for it is useful and beautiful, a combination very, very hard to beat.

The Hunter's Conflict

(From page 16)

the air far too close to us for comfort. Some of the hunters were friends of mine and some were complete strangers. Regardless of our closeness, however, not one of them offered to turn his hand in an effort to get the trees planted. Neither did one of the five successful hunters offer a piece of game.

In other words, deadlines set down by the time of year, approaching seasons, and the ACP schedule of events forces us to spend our time planting trees, while strangers and friends remove the surplus rabbits and quail from our farm. Is it selfish to believe that this is unjust? If I didn't care about hunting, I am certain that my feelings here would be greatly relieved, but I do like to hunt and my antagonism is accentuated. In fact, hunting is as much a part of my makeup as any recreation could possibly be, and it seems a man shouldn't have to worry about his own game being killed off before he has a chance at claiming his share.

Here again I find my feelings modified by small acts of consideration. I find myself viewing the man who comes up to the house to request permission to hunt in one manner, and looking at the man who sneaks in the back way in another. The one who asks is allowed to hunt, even though I'd just as soon he didn't. The fellow who sneaks in on the backside of the field is classed as a "poacher," and I'll travel a long way and go to a lot of trouble to run him off. Yet, the only basic difference between the two men is that one bothered to ask and the other didn't.

Certainly, hunting private lands is a two-way proposition, but it is not a 50-50 proposition. Ownership is on the side of the farmer, and it will always be. When sportsmen attempt to bargain for what is often

called "rights," they are actually bargaining for privileges. The landowner may listen attentively to arbitration, but nothing in the law says he must abide by the decision of the arbitrators. The sportsman should hope for arbitration, so that he may share to a limited degree in the landowner's production of game. When you bargain for hunting rights however, you are bargaining for favors, not justice. This farmer controls the hunter's destiny as our lands become more crowded with outdoorsmen. Our main hope then is not complete ingress and egress, but a reasonable facsimile, even if the frequency is governed by our pocketbooks more than it is by our personality and good character.

When we had finished paying the labor bill on planting our 5000 pine trees last fall, our total balance was \$1.33, which meant that all labor would thereafter be done by us or not at all. In other words, our farming progress would be limited by lack of funds, unless we came up with another solution or an extra assessment of the individual partners.

Such circumstances undoubtedly face all farmers at one time or another. Any gesture of assistance during these critical times would undoubtedly meet with gratitude and a friendly feeling towards those volunteering help. It would seem a most logical approach to future hunting, if the hunters were to make the overture.

To overcome this financial burden, which was restraining our progress, we considered leasing hunting rights on our land. It seemed logical and equitable, but the thought was soon driven from our minds. Talking with other landowners who had tried this approach, we found that some clubs bound the

owner so tightly that he could not hunt without the club's permission.

Further, it would appear that some people believe that landowners should do as they say, not as they do. Many men, outspoken on the subject of posted farm lands, are not true to their apparent convictions. They have leased or purchased land where the first order of business was to post tightly against all trespass. Such has been the rule, rather than the exception. Farmers see this contradiction of sportsman preaching, and in turn see no argument when they forbid hunting. Here, the farmer has something to protect as real as his very existence and the future security of his family. In nearly all cases, clubs have nothing to protect except the game on their lands. One act is for self-preservation; the other is tinged with personal gain or benefit. When a farm is posted, permission to hunt may be granted upon request. One needn't bother to request permission to hunt a club's land once it is posted. It will not be forthcoming, except on rare occasions.

Life on the farm is itself a struggle. It builds a man's back and more often tests his faith. After fighting weeds, bugs, and drought the farmer's shell becomes naturally hardened to conditions around him and, it often appears, to the feelings of others. He asks no quarter in this fight with the elements, and at the same time he accepts what he has to and rejects just as quickly that which he needn't accept. A stranger across the field is not just another hunter to him. He may not menace crop or income, but he is an intruder. He is a nuisance, like weeds in the cornfield, and he is often dealt with abruptly and without obvious conscience. The hunter, therefore, is just another "risk," except that men can be regulated more than weeds.

If hunters, in their never-ending search for the proper approach to hunting private lands, can change the thinking of farmers from one which classes them as "risks" to one which classes them as "assets," then and only then will hunting be assured. In doing this, there are two very definite means. One is to make an outright payment for services received. In other words, so much money for hunting privileges. The other approach is to spend a day or so during the year laboring on the farm one hopes to hunt. I know personally that every man who is willing to help me plant trees or put

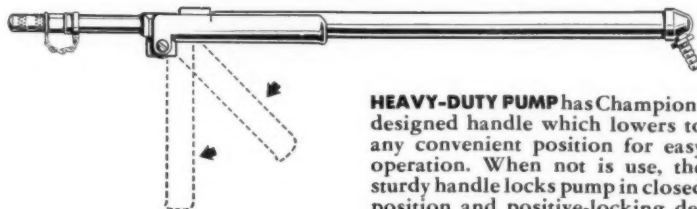
up fences has his hunting rights guaranteed on my farm. Nothing is admired by any farmer more than hard work. It gains his respect and gratitude.

In respect to those who most often offend the farmer, it might be pointed out that in no case in my professional work, nor during my life on the farm have I found the "city fellers" any more guilty than the "country fellers." Men are not and should not be classed by their residence, for to do so would be like condemning a race for the guilt of an individual. In fact, except in the

few cases cited, I have no quarrel with any man just because he wants to hunt my land. It is an understandable desire. The main thing which I must demand is that all those hunting here must play by my rules.

It seems of all the things one misses in this life, nothing is more sorely neglected and abused than understanding of our fellow man. It is my belief that, were it possible for all of us to walk in the other man's shoes, our troubles in all fields of human relations would soon be resolved.

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HIGH UINTAS WILDERNESS, UTAH

JULY 12 TO JULY 22
\$230 from Vernal, Utah
Party limited to 20

SAWTOOTH WILDERNESS, IDAHO

JULY 19 TO JULY 29; AUGUST 2 TO AUGUST 12
\$230 from Ketchum (Sun Valley), Idaho
Party limited to 25

WIND RIVER MOUNTAINS, BRIDGER WILDERNESS, WYOMING

JULY 25 TO AUGUST 5; AUGUST 15 TO
AUGUST 26
\$250 from Pinedale, Wyoming
Party limited to 25

MAROON BELLS-SNOWMASS WILDERNESS, COLORADO

JULY 29 TO AUGUST 8; AUGUST 9 TO
AUGUST 19
\$230 from Glenwood Springs, Colorado
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YELLOWSTONE NATIONAL PARK, WYOMING

AUGUST 8 TO AUGUST 19
\$250 from Moran, Wyoming
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SAN JUAN WILDERNESS, COLORADO

AUGUST 16 TO AUGUST 26; AUGUST 30 TO
SEPTEMBER 9
\$230 from Durango, Colorado
Party limited to 25

TETON WILDERNESS, WYOMING

AUGUST 22 TO SEPTEMBER 2
\$250 from Moran, Wyoming
Party limited to 25

MT. WHITNEY-HIGH SIERRA, CALIFORNIA

AUGUST 24 TO SEPTEMBER 2
\$250 from Lone Pine, California
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GILA WILDERNESS, NEW MEXICO

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\$250 from Socorro, New Mexico
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THE AMERICAN FORESTRY ASSOCIATION

Washington 6, D. C.

Money Can Grow on Trees

(From page 13)

forest "capital." Every year, the trees put on new growth rings of wood, worth about a total \$1000. This is the "interest" and the Polaks harvest that much timber every year without dipping into their savings.

Or the interest can be left in the forest bank account to accumulate and give *compound* interest. One study shows that if a farmer leaves his trees in the forest bank for 20 years, his average annual profit might be \$8.12 an acre. But by delaying his cuttings another 20 years, his average profit doubles every year. And since trees are not very perishable, if markets aren't favorable one year, profits can be left to accumulate on the stump at compound interest.

Income from a tree farm can finance a harvest of good works. In Bradford, Pennsylvania, the Kendall Refining Company, gave the Kiwanis Club timber rights to a 169-acre tract it owned—on the condition that the club members would manage it according to the best forestry principles. Profits are split 60 per cent for the club, 40 per cent for the company.

The club earmarked its share of the profits to buy equipment for the Bradford Hospital. After only five years of club management, the hospital received more than \$6500 and the forest was actually in better shape than when the club took it over. Says Svend Rondum, the club member who originated the plan and also a forester: "Private enterprise and a service organization figured out a way to work for the betterment of the community. It can be duplicated anywhere."

South Bristles with Pines

Millions of acres in the South bristle with seedlings where no trees have grown in several generations; this new forest is already growing twice as much pulpwood as it did less than 15 years ago—and 80 per cent of this comes from independent owners. After decades of operating our timber bank account at a deficit, forests in the United States are now growing timber faster than it is being harvested. Today, when a progressive logger fells a tree, there is certain knowledge that a new one will grow in its place.

The Rome Kraft Company of
(Continued on page 51)

Senator Stennis to be Keynoter at AFA Meeting

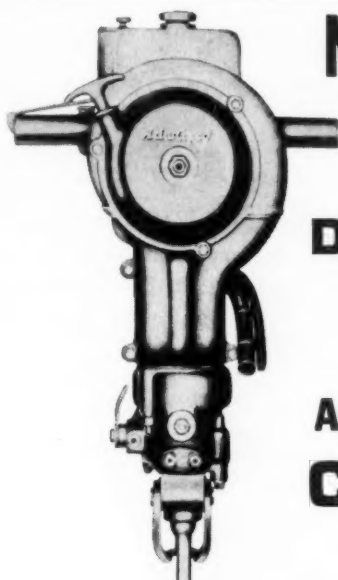
Senator John Stennis of Mississippi has been named keynote speaker for the 85th Annual Meeting of The American Forestry Association, October 17-19, at the Edgewater Gulf Hotel, Edgewater Park, Mississippi. Senator Stennis has long been interested in resource affairs, particularly forest research, and through his committee assignments during 12 years in the United States Senate has gained a working knowledge of government activities affecting forestry and agriculture.

Realizing that forests have an important part in this country's future, the Senator devotes much of his time to research. Recently the Forest Farmers Association presented Senator Stennis with an award in recognition of his outstanding contribution to forestry. Conferees in the Senate, including such leaders as Senator Hayden of Arizona, agree that his efforts for expanding forestry and agricultural research are producing results. The most recent achievement is his amendment providing for the new regional boll weevil laboratory at Mississippi State University.

Chief Richard E. McArdle, U. S. Forest Service, will present to the Annual Meeting the Program for the National Forests as reviewed before the House Agriculture Committee in the first session of the present Congress. This long-range conservation program includes plans to develop forest resources to meet population pressures by the year 2000.

Another highlight of the AFA Annual Meeting will be an hour-long pageant in honor of National Forest Products Week. The pageant will depict forestry advances from 1875, the year the association was founded, to 1960. This will be part of a nation-wide program hailing the remarkable advances in industrial forestry.

Plans are also being considered to conduct a roll call of states to point up outstanding gains that have been made in forest fire prevention in the South since the first Forest Fire Prevention Conference in New Orleans in 1955.



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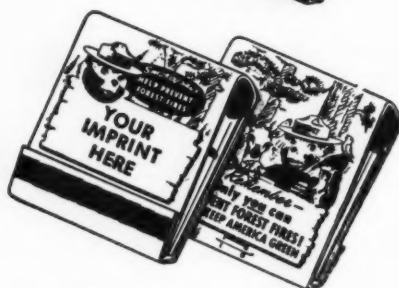
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Money Can Grow on Trees

(From page 48)

Rome, Georgia, purchases two million dollars worth of wood every year from tree farmers as far as 200 miles away. They have 15 graduate foresters to work exclusively with tree farmers—marking timber, marking out free management plans, donating a million seedlings a year.

Some forest-products firms rely almost exclusively on backyard stands of trees—like Nickey Brothers of Memphis which works with neighboring tree farmers in Tennessee, Mississippi and Arkansas counties to insure future crops of timber. About 15 years ago, Nickey realized that it had no permanent supply of timber to expand its operation. And it couldn't afford to purchase enough land to supply the timber it needed to manufacture more than 2000 wood products. So it set up Tree Farm Families among interested persons in Tennessee, Mississippi, and Arkansas to ensure its timber supply.

The first woodlot owner approached was E. K. Boyd of Bolivar, Tennessee. He owned about 200 acres of forest land, but wouldn't allow a lumberman into his woods. To date, Nickey has paid him about \$9500 for timber harvests—more than a buyer offered him for the entire tract just before he entered the plan.

Now there are 78 Family members with a total of 24,200 acres. They already are supplying about half of Nickey's wood needs. Many of them are doctors, lawyers, retired people, farmers who grow the trees for extra income. To become a member of the family, the owner and Nickey sign a simple letter of agreement. Nickey agrees to help manage the forest, weed out defective trees, advise on cuttings, help the owner

plant barren acres by distributing seedlings. In return, the owner will protect the land from fire and grazing, and give the company first refusal on the buying of timber.

Big Job Yet to be Done

Rebuilding forests is a job for Paul Bunyan, and everyone is helping. Today, 46 states (partly aided by the federal government) offer the small woodland owner free technical advice and assistance in forest management. Since this program began 23 years ago, about an eighth of the total acreage of small forests has been put under management. But most of the job still remains to be done, so private forestry has mobilized too. Distinguished among the industry leaders is the Southern Pulpwood Conservation Association of Atlanta, Georgia. Its enlightened self-interest has thrown a green mantle across the entire South. The association of pulp and paper manufacturers has to date assisted well over 75,000 landowners who have a combined acreage larger than the state of Georgia.

In 34 northern Wisconsin counties, paper mills and electric power companies have been financing Trees for Tomorrow, Inc. for the past 16 years. When it began, no one was interested in trees in this ravaged land. Now thousands of tree farms have sprung up because of the 54 million seedlings this organization has inspired to be planted. Conifers everywhere march across the landscape. Today there are 17,000 certified tree farmers in 47 states allowed to display the diamond-shaped emblem of the American Tree Farm System. This 20-year-old program, financed completely by for-

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(2-0), 2 yr., S.,	4 to 6 ins.	2.75	17.50
(3-0), 3 yr., S.,	8 to 15 ins.	4.25	27.50
(2-2), 4 yr., T.,	10 to 18 ins.	6.00	40.00
(2-3), 5 yr., T.,	12 to 24 ins.	8.25	55.00

WHITE PINE

(Pinus strobus)		Per 100	Per 1000
(2-0), 2 yr., S.,	4 to 6 ins.	3.00	20.00
(3-0), 3 yr., S.,	5 to 10 ins.	4.50	30.00
(2-1), 3 yr., T.,	3 to 6 ins.	6.75	45.00
(2-2), 4 yr., T.,	6 to 14 ins.	8.25	55.00

COLORADO BLUE SPRUCE

(Picea pungens)		Per 100	Per 1000
(2-0), 2 yr., S.,	3 to 6 ins.	3.75	25.00
(3-0), 3 yr., S.,	4 to 8 ins.	6.75	45.00
(3-0), 3 yr., S.,	6 to 12 ins.	8.25	55.00
(2-2), 4 yr., T.,	6 to 10 ins.	12.00	80.00

NORWAY SPRUCE

(Picea abies)		Per 100	Per 1000
(2-0), 2 yr., S.,	4 to 6 ins.	3.50	22.50
(3-0), 3 yr., S.,	8 to 16 ins.	5.25	35.00
(2-2), 4 yr., T.,	8 to 15 ins.	9.00	60.00
(2-3), 5 yr., T.,	10 to 20 ins.	12.00	80.00

DOUGLAS FIR

(Pseudotsuga taxifolia)		Per 100	Per 1000
(2-0), 2 yr., S.,	4 to 7 ins.	4.25	27.50
(3-0), 3 yr., S.,	5 to 12 ins.	6.75	45.00
(2-2), 4 yr., T.,	8 to 14 ins.	12.00	80.00

CANADIAN HEMLOCK

(Tsuga canadensis)		Per 100	Per 1000
(2-1), 3 yr., T.,	4 to 6 ins.	10.50	70.00
(3-1), 4 yr., T.,	5 to 12 ins.	12.00	80.00

WHITE FLOWERING DOGWOOD

(Cornus florida)		Per 100	Per 1000
(2-0), 2 yr., S.,	12 to 18 ins.	7.50	50.00
(3-0), 3 yr., S.,	24 to 30 ins.	12.00	75.00

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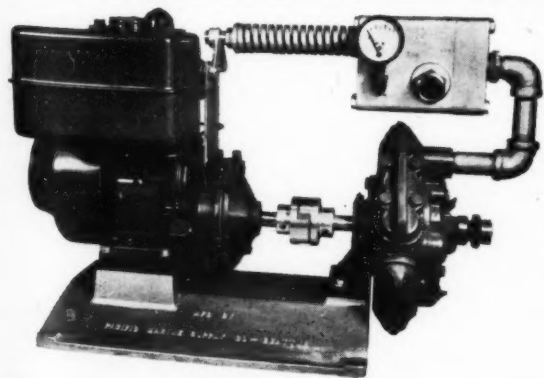


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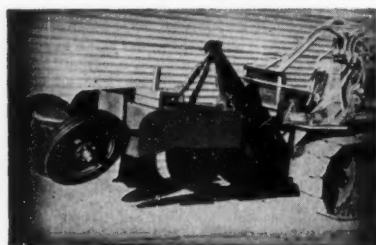
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est products industries, is dedicated to growing trees as a cash crop on private, tax-paying land. It gives recognition to timber owners who are doing outstanding jobs in forest management. To be certified, an owner must protect his woods from fire, disease, insects, and cattle grazing. The land must be permanently devoted to growing and harvesting repeated tree crops. Advice and inspection by Tree Farm System foresters costs nothing; the profits and harvest of other benefits they can show you are truly amazing.

How Do You Start?

How do you get started? If you already own land, trees growing on it can be "managed" to produce maximum benefits. A nearby forest-products industry probably already has a tree-farm program underway, with foresters to aid you. Or a letter to your state forestry department will bring prompt assistance. American Forest Products Industries, Inc., 1816 N Street, N. W., Washington 6, D. C.—organizers of the Tree Farm System—can send you literature and put you in touch with local and regional forestry groups.

The forester will first want to cruise your land and develop a long-

range plan that will insure steady returns. Probably he'll suggest the removal of poorly-formed, defective trees. He may also suggest a thinning of overcrowded stands and the harvest of mature trees. This will provide some immediate cash income and also leave more growing room for the healthy trees to put on wood. The forester will suggest where to plant to bring every acre up to full productivity (43 states, by the way, supply seedlings free or at cost).

Starting a tree farm from scratch makes good sense, too. Most authorities advise against paying too much for land with no trees growing on it—not more than an average of about \$10 an acre in the northern states, about twice that in the South where trees grow faster. It's often better, however, to invest a few dollars more per acre and get land with some timber on it already. That way, you'll start getting revenue sooner. You can reforest idle land by planting a thousand trees to the acre in about two or three days by hand.

Is there still land to be planted? The U. S. Forest Service estimates there are about 48 million acres in need of replanting. Much of this land is good for nothing but trees!

Litterbugs Climb High

(From page 23)

country. Sierrans on their outings have been cleaning up camps and policing trails for many years. But the "Mount Whitney Anti-Litter Expedition" was the first official move in a concentrated program to make Southern California's mountain recreation areas neat and clean—and to keep them that way.

A lot of preliminary planning was necessary for such an ambitious project. Commissary, equipment, packing in, and all the incidentals for a smooth-running camp had to be provided for. In fact, the committee spent several months making arrangements, and correspondence and phone calls were heavy. But finally, on August 8th, the thirty dedicated anti-litterbugs met at Whitney Portal, the road-end above Lone Pine, and hiked 3.5 miles up the Mount Whitney trail. Dunnage was brought in by pack train, and the group set up headquarters in a beautiful, rock-bound alpine basin on Lone Pine Creek at an elevation of 10,300 feet.

For the next eight days work parties covered every inch of the trail-

side, from the base of the mountain to the summit. All cans were smashed flat and dumped in burlap bags, and 103 of these bulging sackloads were left beside the trail to be brought down later by the packers. Bottles and jars were smashed, too, put in gallon cans and sacked. The total was 75 cans-full of glass. Combustible material was gathered and burned in neat bonfires, and literally hundreds of bushels of garbage, papers, cartons, boxes, and old clothes went up in smoke. Hardy souls spent hours wading in the icy waters of timberline lakes retrieving subaqueous litter, and rock climbers descended the precipitous east face of Mount Whitney to gather refuse thrown over the edge by scores of past summit climbers. Altogether eight sacks of smashed cans were collected on top of the 14,496-foot mountain.

But actually these obvious activities were the easier part of the work. The real challenge was in picking up the little stuff: the fragments of broken glass, the elusive bits of aluminum foil, the evasive rinds of

orange peel, the ever-present shreds of cellophane. Then, too, it's a frustrating experience to try to burn a wet, torn tarpaulin, a soggy pair of jeans, and a few discarded pairs of shoes, particularly on the woodless slopes above tree line. However, the group solved the high-altitude burning problem by taking along several pints of gasoline.

Nothing large or small escaped this eagle-eyed work crew. The job was done with painstaking thoroughness, and on August 16th the "expedition" returned to civilization leaving a much cleaner Mount Whitney than they had found. Let us hope it remains that way.

But even though this was a project with a serious purpose, the anti-litterbugs managed to make an outing of it in true Sierra Club style. They enjoyed three good meals a day, provided by a hard-working commissary group of members; parties climbed a couple of the surrounding 13,000-foot peaks; and each evening they relaxed around the community campfire, with impromptu songs, music, and entertainment. In fact, they had such a good time that at least half of them have volunteered for future service, and offer to chip in \$10 apiece for the privilege.

The "Mount Whitney Anti-Litterbug Expedition" was greatly aided by the co-operation of many outside concerns, organizations, and individuals. Among them was the United States Forest Service, in whose bailiwick the job was done. Some gave outright donations, while others allowed substantial discounts on food and equipment. But per-

haps the most generous contribution of all was made by the Mount Whitney Pack Trains, which removed 33 mule-loads of sacked cans free of charge. Publicity for such a worthy cause wasn't forgotten, either; several members put in considerable time on stories for newspapers and magazines.

There are great possibilities ahead for the Sierra Club's Anti-Litter Committee, both in direct action and through education. It is hoped that the idea may spread to other outdoor groups and to city, county, state and federal agencies—thus eventually to the general public. The committee already has two more anti-litter expeditions planned for 1960. One will be at popular Dollar Lake in the San Bernardino Mountains, the other in that fisherman's paradise of the High Sierra, Rae Lakes.

One interesting result of the Mount Whitney pick-up job is in regard to burying refuse and cans. This is the accepted practice of neat campers the world over. But the group discovered that cans don't remain buried permanently. Animals, erosion, frost-heave and one thing and another often push such refuse to the surface. So the committee has inaugurated the "Plus 1 Club." On outings its members carry back every can they took with them plus one that they find.

Maybe these cleanup expeditions aren't the complete answer to America's litter problem. But they certainly are an excellent beginning, and their example may shame us all into doing a little better job at outdoor housekeeping in the future.

A Forest Recovers

(From page 30)

er can find many individuals of the various conifers represented on the island. Certainly the most obvious regrowth of conifers can be found in localized areas where the pitch pine has had a chance to reseed itself from parent trees which survived the fire, or remained alive under a fire which crowned above the younger trees. This is particularly noticeable in an area along Ocean Drive near Sand Beach, and another near the southern limit of the burned area near Otter Point. The pitch pines evidently seeded themselves soon after the fire, for they are now considerably larger than most of the other evergreen seedlings, although

many species of conifers appeared within a year.

Over a larger area, but not so thickly represented as the pitch pine, one can find many individuals of the red spruce. Some of these have reached a height of more than 50 inches, although most are considerably smaller. With the exception of the previously mentioned pitch pine in local areas, it is interesting to note that the reproduction of spruce seems to have progressed more rapidly than reproduction of pines or fir. Perhaps this is caused by the original dominance of spruce in the area, and in contiguous areas, furnishing a proportionately larger

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amount of spruce seed compared to the others.

The cycle becomes apparent: from spruce to nothing, nothing to berries, berries to hardwoods, hardwoods to spruce. Perhaps in a generation this area will again be an intermixed spruce-fir-birch-aspen-maple-oak forest, subequal in size, and in a generation following that, a spruce-fir forest until some accident of man or nature upsets the balance.

For the present, though, the wounds of fire have healed into scars. Luxurious stands of orange, yellow, and red mark the twelfth anniversary of a month of disaster characterized in black. The hardwood forest is only temporary, but so are many of the beautiful things of nature.

Beavers, Bones, and Beauty

(From page 22)

Supplementing the beaver story are a series of water conservation exhibits. One of the first is the "drop tower." This has been found to be the simplest way of demonstrating the effect of rain on our valuable soil. In the base of this green eight-foot-high tower are three squares of earth. On one square, the soil is bare. On the second square is a light ground cover of growing material. On the third square is a heavy growth of grass. From the top of the tower at the rate of 40 drops per minute fall single drops of water by gravity into the center of each square. On the first square, the impact of the drop of water propels tiny particles of loose soil through the air as much as three feet and bores a hole into the vegetationless ground. On the second square, due to the light covering of grass, the water does not splash as much, and some of it soaks into the soil. On the third square, water hitting the thick ground cover does not splash or displace any soil but rather runs down the blades of grass and is completely absorbed by the thirsty soil. This demonstrates the ability of ground cover to retain moisture, control run-off, and so avoid the terrific gullies which result from water assaulting the bare earth.

Another exhibit, built by the Soil Conservation Service, is composed of four plots of land, two representing upland, two lowland. One of each type shows poor, overgrazed, eroded terrain, while its counterpart illustrates how land can be rehabilitated by proper planting, di-

version terracing, use of rainfall, etc.

The Soil Conservation Service has also built an earth dam over a hundred feet long at the crest across the deep arroyo beside the museum. At present, lectures delivered while the visitor is looking down into it describe the various stages of land destruction and how to prevent this invaluable natural resource from being washed irretrievably downstream. Eventually there will be a diorama, a map, and other devices to interpret it to the public. In one sudden thunderstorm in 1958, this usually tinder-dry arroyo with its powdery red dust ran a waterfall, 18 feet wide and eight feet high, and cut away 11 feet of the bank towards the adjacent highway. Not many such downpours would be needed to undermine the highway. Nature contrived to stage quite an educational demonstration!

The U. S. Forest Service contributed four color transparencies which show the catastrophic damage done to a forested watershed by fire. These pictures flank a remarkably realistic lightning display which was designed and constructed by the museum staff for the exhibit hall. In it, million-volt flashes of man-made lightning strike two miniature mountain peaks which jut up into an overcast artificial sky. It is easy to see how fiery bolts of uncontained fire can ignite and destroy our beautiful forests.

A 12-foot long diorama in the museum ties together all the other exhibits. In three parts, it shows country similar to that of Ghost Ranch with banded colored cliffs at whose base is rangeland and above which is high timberland. The first segment is green and lush, as it was before man appeared on the scene. The grass is tall, the assorted game plentiful and fat. The second segment represents the present with stunted growth and barren range resulting from an excess of cattle and no run-off control. The last segment demonstrates what the future could be in the same area with intelligent co-operation with nature. A prosperous ranch supports a moderate herd of cattle with irrigated feed lots. When the visitor presses a button, a thunderstorm deluges the high country and the run-off washes down the cliffs onto the rangeland. In the central area, a muddy flash flood races down the arroyo and appears to erode the unprotected soil. In the other two areas, the rain is utilized and seeps into the ground where it is stored and used.

The interrelationship of all parts of nature is stressed throughout. The fact is emphasized that even predators, those much-maligned creatures, serve a necessary purpose. It is explained that the mountain lion, the coyote, and the rattlesnake, all commonly considered anathema, are indispensable in maintaining the essential balance of nature. Extermination of predators locally has resulted in almost a plague of field mice.

Visitors from the nearby religious conference center stream to the museum singly and in groups, school-buses loaded with children make pilgrimages to learn more about the natural functions of the universe, and travelers speeding along the busy highway brake their cars to go through the isolated museum. Many lectures are given in the outdoor amphitheatre facing the cliffs at the back of the building. An attractive flat-roofed edifice, it is the only structure right on the road for many miles in either direction. As with all things of true merit, the museum draws the interested and the curious from afar.

New Mexico's first living museum commands a magnificent view fifty miles down the Chama Valley to the lofty snow-capped Sangre de Cristo mountains as well as nearby pine-studded peaks and the interesting adjacent tan, cream, and red sandstone cliffs. Sometimes antelope feed on the range within sight of the museum patio in the early morning or late in the afternoon. The inspira-

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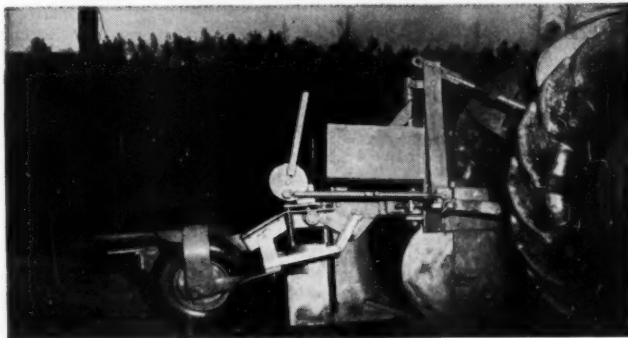
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tion of the grandeur of nature in the setting of the museum cannot but leave an indelible impression on the visitor. And once he has walked through the hall, studied the outside exhibits, browsed through the library, listened to a lecture, and asked questions of the staff, an entirely new world opens up to him. Behind the beauty around him, there is a story, a purpose—and perhaps he grasps more understanding of it from having paused here.

If our enthusiasm for the place seems oppressive, please bear with us. Having participated in the construction phase of the project under William H. Carr, we watched it grow. And even though we are no longer there, we cannot but laud its merits. When we left, it was not completed. It still is not in its final form. And we suspect that, like all dynamic institutions, it will continue to grow in size and influence for a long, long time.

As the Reverend Eugene Carson Blake, D.D., immediate past president of the National Council of Churches of Christ in the U. S. A., said in his dedication address last summer, "... a little time here ... will put self, life, God, and His purpose in perspective again. And this is important. Religion without wonder becomes magic or academic."

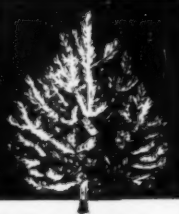
What Can We Do About Water?

(From page 19)

The University of Illinois and Southern Illinois University appointed Advisory Committees to work with the Board of Trustees. Investigations were made by the State Conservation Department, the Illinois Water Survey Division, and the district itself. The U. S. Park Service, Forest Service, Fish and Wildlife Service, Soil Conservation Service, and the Corps of Army Engineers were all consulted. The conclusions are that Rend Lake offers the best underdeveloped reservoir site in the region and one of the best in the entire Midwest for supplying water for municipal, industrial, and recreational development. It also offers flood water storage, will make possible a low flow guarantee, and has exceptional waterfowl management potential.

Now, note this well: No single local, state, or federal agency has the necessary authority to obtain funds to build such a lake! The only possible way it could now be built

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Proper management of forestry planting projects calls for the finest in Evergreen Planting Stock available. That's why it will pay you to investigate the superior growth and better survival of Suncrest Seedlings and Transplants. Hardy, north-

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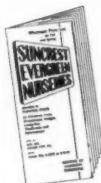
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FINANCIAL STATEMENT

The American Forestry Association

BALANCE SHEET AS OF DECEMBER 31, 1959

ASSETS		LIABILITIES AND SURPLUS	
Cash	\$107,763.31	Accounts Payable	\$ 9,992.76
Accounts Receivable	3,908.22	Other Current Liabilities	2,546.50
Inventories	14,814.12	Deferred Income	97,344.86
Furniture and Equipment (Net)	19,918.07	Reserve for Future Expenditures	13,761.99
Other Assets	724.94	Surplus	412,849.44
Endowment Fund Assets	389,366.89		
Total	\$536,495.55	Total	\$536,495.55

INCOME AND EXPENSE ACCOUNT FOR THE YEAR ENDING December 31, 1959

EXPENSE		INCOME	
Membership	\$ 60,575.62	Membership Dues	\$190,621.20
American Forests Magazine	138,525.99	Advertising	67,778.29
Sales	18,010.61	Sales & Miscellaneous Income	29,274.49
Conservation Department	83,185.00	Trail Riders	72,595.00
General Administration	65,035.35	Contributions & Bequests	16,312.79
Total Expense	\$365,332.57		
Excess Income over Expense	11,249.20		
	\$376,581.77		\$376,581.77

In our opinion the above condensed Balance Sheet and Income and Expense Account, fairly present, respectively the financial condition of The American Forestry Association at December 31, 1959 and the results of its operations for the year ended on that date.

SNYDER, FARR AND COMPANY
Certified Public Accountants

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 3 to 5 yr. healthy, selected trees, 6" to 16" tall, 5 each of: Colorado Blue Spruce—Norway Spruce—Austrian Pine—Scotch Pine—Douglas Fir.
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HAS IT OCCURRED TO YOU?

There are many members and friends of The American Forestry Association who find it impractical to contribute to its educational activities during their lifetime. Gifts in the form of a bequest are welcomed. Officers of the Association will gladly consult at any time with those who wish to know more about designating gifts for educational work in forest conservation.

Following is a paragraph suitable for incorporation in wills:

"I hereby give, devise and bequeath _____ to The American Forestry Association, Washington, D. C., a non-profit District of Columbia corporation, or its successor, or successors, for the purpose of promoting the corporate activities of said Association."

THE AMERICAN FORESTRY ASSOCIATION
 919 Seventeenth Street, N.W.
 Washington 6, D. C.

would be by several agencies working together. But, due to various regulations, laws, and customs, most of these agencies can not participate in a joint venture of this type.

Right now, let's take a detailed look at this proposed lake that nobody can build. It is not a hypothetical case, but a very real one, on which the local people and the state have already appropriated a quarter of a million dollars. This would make it seem that the situation is well in hand, but that is not so. At the rate at which money has become available, it would take 250 years to do the job.

If the \$25,000,000 price tag on this project seems high, remember that increasing population pressure is continually pushing land values up. Delay will increase the cost, but let's see what we would get for our money when it is built:

A 25,000-acre lake with:

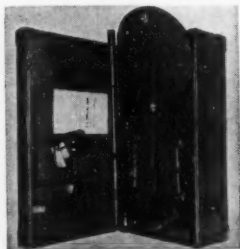
1. 99 billion gallons of water (302,500 ac. ft.) of which
 - a. 40 million gallons a day would be available for consumptive use as municipal, industrial, and agricultural water supply.
 - (1) 31 towns and cities with 69,000 people in four counties are within 15 miles of the reservoir site.
 - (2) At 5¢ per thousand gallons, this consumptive water would represent a value of \$35 million dollars in 50 years or a 2:1.4 cost-benefit ratio on this one item alone. Incidentally, the predicted useful life of the lake is 350 years; also, there would be:
2. 219 miles of shoreline with 25,000 acres of peripheral land in public ownership which would

offer recreational opportunity to:

- a. 2.5 million people from four states within 100 miles with:
 - (1) 25,000 acres of public boating and fishing water.
 - (2) 10,000 acres of public parks, beaches, camp ground or quasi-public (leased) cottage, club, and group camp sites; marinas, concession areas, and industrial sites.
 - (3) 25,000 acres of public hunting grounds which includes 20,000 acres (land and water) of manageable waterfowl area.
- b. Using Senator Kerr's suggested value of \$1.00 per visitor day, the predicted million-plus yearly users would give a 50 million dollar benefit in a 50 year life for a 2:1 benefit-cost ratio.
3. 142,500 acre feet of flood water storage would be available.
 - a. Assigning an arbitrary value of \$1.00 per year for an acre foot of flood storage capacity, seven million dollars of benefit is created during 50 years.
4. Mine head electric generating potential based on
 - a. 10 billion tons of proved coal reserve within two counties where the lake would be of which
 - (1) 100 million tons are located 600 feet under or within short conveyor haul of the lake.
 - b. The tremendous savings to the power grid customers in four states possible from the efficiencies inherent in a major mine head power plant in this area could exceed the entire project cost many times.

These are some of the major benefits that could occur if Rend Lake could be built. There are many more.

All right, why doesn't the Conservancy District build the lake? Until this year, the legal bonding power was 2.5 per cent of the district's 136 million dollar tax base. This three million dollar debt limit was raised by legislative action in July to five per cent, or six million dollars. This is still less than one



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Recommended by U. S. Forest Service and in numerous articles for finding concealed metal in logs and timber products. The Dantzier Lbr. Co., Perkinson, Miss., reports an estimated savings of \$5,000 to \$6,000 yearly. Write us for copy of free report of U. S. Forest Service.

The SCR-625 is a portable instrument which may be used in the field to give an audible indication of buried metal in logs, underground, or in water. It may also be connected permanently with suitable automatic control devices for stopping machinery should imbedded metal in logs be encountered.

Detector is shipped in handy portable carrying case with instructions and ready to operate except for batteries. Ship. wt. 55 lbs. Our recent Government surplus purchase allows the present low price of \$79.50 ea. New set of Batteries, per set—\$6.27. Special price to quantity users or dealers upon request.

We maintain service and parts of the SCR-625. Parts price list on request.

Used Metal detectors \$39.50

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fourth of the total estimated cost. For practical purposes, this is all they can raise. The local people are showing their faith in the project by using local tax money to purchase some 2,400 acres of land in the lake area, for engineering studies and for continuing promotion. However, they could not vote to approve the heavy tax increase a bond issue would involve unless they were assured that the rest of the money to complete the project was available.

But the local people are not the only ones who will benefit. Many benefits are collectible only at state or national levels. For example, increased use-tax collections and hunting and fishing license sales returns would go to the state. Increased collections of gasoline taxes go to the state and federal government. Increased income tax returns from individuals and businesses go to Uncle Sam, as would the increase in Duck Stamp revenues. Reduced relief costs in the area would benefit all three levels of government. An additional obstacle to local initiative was the recent federal legislation which forced laws precluding a local government unit from earning money by licensing boats. This item alone yielded \$65,000 to Ohio's Muskingum Conservancy District in 1957.

How about the state? No single state agency is presently staffed, equipped, or authorized to take on an overall project of this size. The job might be broken down into several parts that could be handled by various state agencies if given the go-ahead. The Park, Forestry, Fish and Wildlife, Highway, and Waterway Divisions could all play a major role in certain phases of development, and many other state agencies could play supporting roles. The state has already helped with major basic engineering and a recent appropriation for land, but our governor says that until federal participation is assured, he will not approve major state commitments.

What about federal help? The Reclamation Service doesn't operate east of the Mississippi (we are about 70 miles east). The Soil Conservation Service is out because of the large size of the lake, and because the only benefit they can recognize is agricultural flood damage. For example, we have a small watershed project in the Sevenmile Creek, a Big Muddy tributary area east of the major city of Mt. Vernon. S. C. S. proposes six small dry detention structures. A single combined wa-

ter storage-flood control structure which would be the nearest and best possible water source for the city of Mt. Vernon is ruled out. Why? Because the lake comes out with a cost benefit ratio of 1:0.7. No matter how desperate a city might be for water, agricultural flood damage is the only benefit S. C. S. is allowed to incorporate, no matter who else might be willing and able to pick up the tab for the difference.

The Forest Service and Park Service are interested, but helpless to assist in other than an advisory way. The U. S. Fish and Wildlife Service might help, but they are concentrating currently on duck breeding grounds, rather than goose wintering or duck nesting and feeding areas.

That leaves only the Corps of Engineers. The Corps is quite frank in saying: "Your people were smart enough to build your towns and buildings far away from the flood plain, and they have already gone to the expense of raising the railroads and highways above the flood levels and abandoned to brush the fields that flood regularly. In effect, you are penalized because there isn't enough flood benefit to help you." They are not allowed to credit recreation or low flow increase as a benefit. The Corps has been able to figure cost-benefit ratios only on navigation and flood control until last year when they were permitted to recognize water supply values; values that the Soil Conservation Service cannot count as a benefit.

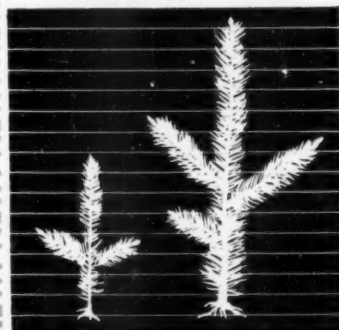
Can the Corps help at all with Rend Lake? Four years ago, reconnaissance studies of the canalization of the Big Muddy River, a completely separate project, were started. Preliminary studies which might have been completed two years from now were not appropriated for this year. If they can be re-activated,

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then authorization and and appropriation proceedings which will take an unknown period of years can begin. According to rough guesses, Rend Lake at the head of the canal might have some navigation value, when and if canalization should prove feasible at some unknown period in the future.

After five years, no federal assistance through any existing channels is in sight.

Meanwhile, Rome burns! Community decay continues. Industries willing to use our unemployed labor reject our water-short towns. Last summer, a 15-million-dollar fertilizer plant that wanted four million gallons of water a day turned this area down. Before that, a rubber plant and an aluminum plant decided against the location. A member of the Illinois Public Aid Commission has stated, "The potential savings in relief costs alone could build the whole Rend Lake Project in a few years' time." We sit on top of the world's richest coal fields, yet we have to haul our coal 90 miles south or 70 miles west to water, then build high tension lines to bring back what has then become high-priced electricity.

Can a smaller, less costly project be developed on this site? A five foot lower lake elevation cuts the water yield 100 per cent, the flood detention capacity by 35 per cent, saves only 10 per cent in cost, and would be inadequate to meet even municipal water needs of 1960.

Here we have a great and urgent need for water development. Both local citizens and the state have worked hard to get it underway. Despite very provable benefits that would be in the federal interest, after five years there is still no federal water agency participation. What can be done to get this and many other badly needed projects underway without interminable delay?

1. *Establish a broad overall national water policy.* This policy should clearly set forth the role of the federal government in water development. The National Watershed Congress, the Soil Conservation Society of America, and other groups have long advocated this. Many groups made good drafts of such a policy.

2. *Continue and broaden support for basic water research.* We need to know: What trees intercept and transpire how much water under what circumstances. How much water can or should be guaranteed

for low flows with fairness to all concerned. How we can protect our ever-diminishing supply of economic reservoir sites, not only from highways and subdividers, but from well-intentioned public agencies who continue to gobble up sites for single purpose "drinking water only," "fishing only," or "flood control only" structures.

3. *Clarify, simplify, standardize, and make more expeditious federal procedures for handling water developments.* Congress itself has several committees regularly involved in handling water affairs. A foolproof liaison system between the water committees is needed.

The multiplicity of agencies involved with water should be studied, not only on the federal level, but in most of our states as well. Ways of reducing causes of friction between them and encouraging them to work more closely to develop soundly planned, well-integrated, overall watershed developments should be found. Allowing one agency and not another to recognize water supply as a benefit; not requiring upstream land treatment for all reservoir projects large and small; inadequate shoreline access to the public whose money is making the water developments possible; these are just a few obvious areas needing corrective action.

4. *Encourage state and local initiative in developing long-term multiple use water projects on a watershed basis.* Congressman Gray from Southern Illinois has introduced H. R. #6396, the purpose of which is to encourage local initiative in long range integrated water development. It is now pending hearings before the House Public Works Committee. Many ways of encouraging local initiative are spelled out in this bill. The bill is intended to be a well-rounded national approach. Water authorities such as Wayne Banks in California, Walter White in New Hampshire, Bryce Browning in Ohio, Maurice Goddard in Pennsylvania, Clayton Hoff in Delaware, Clifford Humphries in Michigan, Everett Winter in Missouri, and many others reviewed and made suggestions in the drafting of this bill.

Its provisions, particularly those dealing with site utilization, stream flow stabilization, upstream watershed treatment, and recreation benefits should be given serious consideration by thoughtful citizens who want to "do something" about water problems.

Johnston Re-elected AFA President

(From page 26)

best be prepared to achieve maximum impact. The board expressed the conviction that no such kit prepared up to this time has fully met the needs that exist and that it is time for such a program to be planned and put into action.

The board voted unanimously to disband the present Awards Committee with proper thanks and announced that henceforth not more than one Distinguished Service

Award shall be presented annually, which award will be selected and approved by the board of directors.

A program to liberalize the AFA pension plan for employees was also voted by the board. The plan as proposed would give employees and their families maximum protection during their tours of duty for the association and following their retirement.

Ovid Butler: Pioneer In Forest Education

(From page 27)

resources after the heavy timber drain of World War II. For this project, he raised a quarter million dollars. Upon completion of the survey, he called the Third American Forest Congress in Washington, D. C., to insure full public discussion of the facts revealed by the study. AFA's own Program for American Forestry was the direct outcome of this study and congress.

6) In addition to a series of outstanding forestry projects, Mr. Butler, as editor of *AMERICAN FORESTS*, was successful in dramatizing the science of forestry in terms laymen could understand. His editorial page alone was read far beyond the membership of his own association and was widely quoted. Largely as a result of his efforts, there are today thousands of thought-molders and civic leaders who look to *AMERICAN FORESTS* for the "word" on conservation matters.

Many honors were conferred on Mr. Butler, including the AFA Distinguished Service Award. One that he cherished most highly was the Doctor of Science degree conferred on him in 1956 by Butler University, his alma mater. He was a Fellow of the Society of American Foresters, served that organization as president in 1927 and 1928, and represented it at the 1936 World Forestry Congress at Budapest. He was also a member of Sigma Chi, Sigma Xi, the Yale Club, and the Cosmos Club.

Mr. Butler is survived by his wife, Adele (McMaster) Butler; two sons, Scot, of McLean, Virginia and Capt. Ovid M. Butler, USN, of Alexandria, Virginia; a daughter, Mrs. Hugo Wangelin, of Denver, Colorado; two sisters, Mrs. W. H. Tesst and Mrs. Carlos Recker, Sr., both of Indianapolis; and eight grandchildren. (J.B.C.)

Forest Forum

(From page 3)

The Oregon Dunes (Continued)

EDITOR:

When an issue as controversial as the Oregon Dunes is considered important enough to be discussed in our magazine, there are two equitable courses of action possible: one, to have the story presented completely and fairly with no bias pro or con; two, to present two articles by authors of opposing views.

In the January issue Mr. Morse has presented a very subtle article which may appear to the uninformed as being objective. He has glossed over the opposition viewpoints or ignored them completely. Just consider the single fact that almost all of the seashore included in the original bill is already in state or federal ownership. Therefore, the so-called dunes bill does nothing but transfer the land from one

federal agency to another. This is not mentioned.

Nothing was said about the tremendous cost necessary to develop this area as planned by the National Park Service. No mention was made of the expected increase in tourist business with continued recreation development by the United States Forest Service and the state of Oregon. Nor was it brought out that the 522-acre Honeyman State Park now receives far more visits each year than the beautiful 160,290-acre Crater Lake National Park also in Oregon. It is recognized by many that the United States Forest Service has been, and will continue to be, promoting and developing, in orderly manner at reasonable costs, sound and sensible recreation facilities for the motoring public. Land will always be available for the public under United States Forest Service administration



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and can be developed as needed. The people of the state of Oregon are justly proud of the recreation and park developments by their own highway department, which is second to none. We know this program will continue in an orderly fashion. One gets the impression that the United States Forest Service and state of Oregon are thought to be incompetent for such work and that it must be delegated to the National Park Service.

Why is it that most studies under the auspices of the National Park Service indicate a need for expansion of the park system when the present park facilities are not fully developed? According to the services publications some 90% of the acreage of the system still qualifies as wilderness.

One final thought in respect to land use. It is well and good that we think now about our future recreation needs in respect to our growing population. But for some reason the people that expound these ideas seem to forget that our economy and people of the future will not exist on recreation facilities. Each year we see greater acreages of our best timber producing lands lost to highways, power lines, reservoirs and the special uses. Our future economy cannot afford a continuous unabated loss of public and private timber lands to restricted use developments where mass recreation and other land use are compatible.

Richard E. Schaefer
60 Murlark Avenue
Salem, Oregon

Other Side of Coin

EDITOR:

Your editorial in the January issue of AMERICAN FORESTS suggests a look at "The Other Side of The Coin," a good thought. Why not look at the whole coin?

Wirth refers to the current emphasis in public discussion on "multiple use" as a "campaign" organized and directed against a program for expansion of the national park system, expansion allegedly needed to provide enlarged services for increasing numbers of park visitors and recreationists. The charge beclouds the basic problem and the real issue.

The basic problem is that of meeting and planning for present and foreseeable demands for all natural resources, including outdoor recreation, demands being caused by population growth and changes in standards and ways of living. It is this problem which calls attention to the place and need for multiple use management of forest lands. Its recognition pre-dates Mission 66. It is this situation which demands greater attention to needs and opportunities for multiple purpose management and development of the multiple values which forest lands can provide. The good Lord is not making any more forest lands these days. We will have to do a better job with what we now have.

The situation and the outlook suggests a rational and sober approach. It suggests doing a better and more intensive job of developing and managing the national forests for all of their values. It suggests doing the same on state, county, city, and privately-owned forests and parks. These areas sum totally contain by far the bulk of the outdoor recreation resources for skiing, for camping, for outdoor enjoyment of the forest. There is no reason why these recreation values cannot and should not be managed, improved and developed. Transfer from one jurisdiction to another is not the basic consideration, except probably where in terms of greater need there is a dearth of public ownership which limits

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public recreation use and development.

The situation likewise suggests doing a much better job on the national parks than we already have. Although primarily established for purposes which limit somewhat the forms of outdoor recreation use, most of the existing national parks offer large opportunities for increased outdoor recreation use within their present areas. They have the room by means of improved planning and management to do a job considerably larger and better than is being done now even with the present localized congestions.

In parks such as Rocky Mountain, Yellowstone, Yosemite, and others, each of which contains several hundreds of thousands of acres, the developments have been so located that about 95% of the use is on 5% of the land. Hotel, motel, cabin camp, restaurant, curio shop, and other visitor services are jammed into the front yards of Old Faithful, Yellowstone Canyon, Grand Canyon, and Yosemite Falls. These concentrations so located do anything but preserve these nationally significant geologic, scenic and historic phenomena in their natural settings. Jammed up camping and trailer sites still being developed under Mission 66 provide anything but preservation of nature's outdoor setting for them. If this is what is proposed by park extensions into the national forests to take increased pressures off the congested park camp grounds, God forbid. Would it not be better management to open up and develop 10 to 20% of these park areas to meet the increasing pressures? Even more important, could this not well be done to restore the national heritage features of these parks more nearly to their original and full values?

Yes, national parks can contribute in a considerable measure to outdoor recreation for outdoor America, along with other parks, and national and other public and private forests. It will take a much better job of planning, development and management, however, than is being done today, whether under multiple use, single use or both.

M. W. Thompson
911 E. 13th Avenue
Denver, Colorado

Some Headaches?

EDITOR:

On page two of the AMERICAN FORESTS you gave me last night is an interesting letter about the Menominee forests.

I happen to know that the changeover from the Bureau of Indian Affairs to the tribe is causing more headaches than this letter implies, but it is being done and shortly there will be a romantic story to be written about what the forest people—and the Menominees are truly forest people—do about their forests when they have to live in them and from them.

Robert W. Hudgins
President
International Development Services, Inc.
1270 Avenue of the Americas
New York 20, N. Y.

Note On Sage Brush

EDITOR:

To add a footnote to Olaus Murie's excellent letter opposing ruthless destruction of sage brush: during the severe winter of 1949, when large numbers of livestock were lost in southern Wyoming, there were also losses in the antelope population. Many animals survived, however, thanks to the giant sage located in the great "waste" area west of Laramie. Game commission

personnel discovered that, while most vegetation was covered by several feet of snow, the large sage—or the tops of it—remained above the snow. The antelope made good use of it.

Another footnote, closer to Dr. Murie's home: a few years ago, probably 1951 or 1952, the Wyoming Izaak Walton League had its annual convention in Jackson. Several of us were taking a little ride one morning. Just south of the town, we saw two coyotes in a neighboring field. They appeared in no hurry. We stopped and one of our visiting group took out his gun, preparing to harvest this predator. But our local member protested. "We don't shoot the coyotes here. We like them and so do the cattlemen." All of which bears out Dr. Murie's thesis that all living things have a place in the scheme of things.

The writer was a resident of Wyoming for ten years (1945-55) and president of the state division of Izaak Walton for two years. Also a great admirer, needless to say, of O. J. Murie.

James Munro
Associate Professor
Ohio Northern University
College of Law
Ada, Ohio

Wheat for the Birds

EDITOR:

Much has been said recently about the surplus wheat situation.

May I suggest to our government, who holds the surplus of long standing, a remedy that will relieve, in part, the surplus stock. It is this:

Feed some of that surplus stock that is old to the birds of our land. That would take away weevil-eaten grains that come to the consumers in the way of weevil-laden flour. The birds need a "break." They are the one thing that does away with insects without poisoning the air.

This move may not register on first base with the farmers who lose fruits and other small grains by bird-raids on their crops; but, on second thought, if the birds have plenty of food in the way of grain spread for them, they would not do so much damage to new crops. It would feed rats too? Well, the rats eat off the new field products. Maybe it would be a good idea to think over. Birds are our friends. With destruction of trees in so many areas, the birds have a hard time finding proper shelter, and refuge from depredating animals.

If you will suggest this to governmental authorities, it would have a greater effect than it would should I send it in.

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FORESTRY IN THE FEDERAL BUDGET

(Fiscal Year Ending June 30, 1961)

	1960 Estimated	1961 Budget
U. S. FOREST SERVICE		
Forest Protection and Utilization		
Timber sales administration and management	\$ 19,215,000	\$20,175,000
Reforestation and stand improvement	3,455,000	3,465,000
Recreation and public use	10,173,000	14,830,000
Wildlife habitat management	1,259,000	1,270,000
Range management	2,973,000	3,000,000
Range revegetation	1,595,000	1,600,000
Range improvements	1,960,000	1,965,000
Soil and water management	1,603,000	1,615,000
Mineral claims, leases, etc.	4,332,000	4,369,900
Land utilization projects	1,117,000	1,125,000
Protection—fire	13,973,000	14,345,000
Structural improvements	8,879,000	9,100,000
Fighting Forest Fires	5,000,000 ^a	5,000,000
Insect and Disease Control	6,881,800	6,899,800
Acquisition		
Weeks Act	100,000	100,000
Cache National Forest	50,000
Klamath Reservation
Superior National Forest	1,000,000
Special Acts	10,000	10,000
Research		
Forest and range management	7,104,000	7,354,600
Fire control	835,000	905,000
Insect	995,000	1,049,000
Disease	820,000	880,000
Forest Products	2,854,400 ^c	3,103,400
Forest survey	1,490,000	1,490,000
Economic	447,000	550,000
Construction, research facilities	1,000,000
Roads and Trails—construction and maintenance	28,000,000	30,000,000 ^d
Access Roads—purchase	1,000,000	1,000,000
Indefinite Appropriations	(37,048,758)	(41,460,170) ^e
State and Private Forestry		
Forest fire control	10,085,000	10,087,500
Tree planting	290,000	291,000
Forest management and processing	1,542,000	1,543,000
General forestry assistance	410,800	413,300
TOTAL U. S. FOREST SERVICE	\$138,449,000	\$149,536,500
DEPARTMENT OF THE INTERIOR		
<i>Bureau of Land Management:</i>		
Management of Lands and Resources		
Forestry	\$ 5,537,700	\$ 5,832,500
Soil and moisture conservation	3,733,900	3,252,500
Fire suppression	400,000	400,000
General administration	1,531,100	1,542,200
Cadastral surveys	2,800,800	2,801,200
Other	10,648,500	10,646,600
O & C Lands		
Construction & acquisition—roads	10,024,814	9,078,000
Reforestation & improvements	500,000	672,000
Operation & maintenance—roads	250,000	250,000
Other access roads; buildings; recreation	423,463	350,000 ^f
Range improvements	768,653	925,000 ^g
TOTAL BUREAU OF LAND MANAGEMENT	\$ 36,618,930	\$ 35,750,000
<i>Bureau of Indian Affairs (Forestry and related items only):</i>		
Forest and range management	3,066,000	3,085,000
Fire suppression	140,000	140,000
Road construction and maintenance	14,600,000	13,000,000
<i>National Park Service (Forestry and related items only):</i>		
Forestry and fire control	953,705	1,013,000
TENNESSEE VALLEY AUTHORITY		
Watershed protection and improvement only	1,122,000	1,254,000 ^h

^a A supplemental estimate of \$21,500,000 is proposed.^b For Klamath Indian lands which are not sold to private parties. Funds have been provided in a Budget Bureau "Re-serve for Contingencies."^c Includes \$19,000 from Library, Agriculture.^d In addition about \$13,640,000 will be available from road and trail fund (from timber sales). Also add \$11,860,000 to 1960 figure.^e Includes school fund payments, slash disposal refunds, payments to states, etc.^f Includes \$100,000 for buildings.^g From grazing receipts.^h About equally divided between forestry and watershed projects.



The PS That Spells Money

Power and Stamina — these you *have* to have in a saw. Power for fast cutting of the toughest woods . . . Stamina to *keep* cutting, day after day, under the roughest tests.

In the big, rugged Homelite 9-26, you get Power and Stamina in money-making quantities — and you get it in a saw that handles easily, carries comfortably and cuts right-handed, left-handed or standing on its head.

Next time you're in town, try

this smooth-cutting beauty for yourself . . . watch it slice through trees up to 10 feet in diameter . . . see how the true balance heft and new centered cutting bar make cutting easier and faster. Then, flip off the shroud (loosening just one wing-nut) . . . see how accessible for servicing the rugged engine is . . . how there are no loose parts to misplace.

That's all we ask — just try the Homelite 9-26 for yourself. This saw is its own best salesman!

Joseph Susice, St. Regis Falls, N.Y.

"I have been using Homelite saws for six years and find them fast and tough for any kind of cutting or lumbering."

ANOTHER USER TESTIMONIAL FOR

HOMELITE



- guaranteed for 7 months
- only 26 pounds
- gear drive
- straight blades from 18" to 60"
- also Clearing bar or 16" Plunge-Cut bow

AND REMEMBER THE VITAL P.S. — POWER AND STAMINA

HOMELITE • A DIVISION OF TEXTRON INC.
4203 RIVERDALE AVENUE, PORT CHESTER, NEW YORK



Manufacturers of: Pumps • Generators • Blowers • Chain Saws In Canada — Terry Machinery Co., Ltd.

*As little as \$7.10
weekly after
small down payment*



THINK FIRST OF QUALITY • THINK FIRST OF HOMELITE



BRIEF SPECIFICATIONS

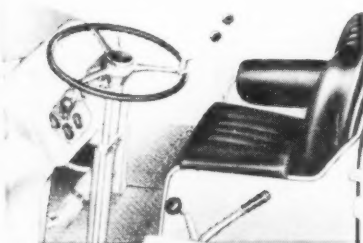
Bucket capacity, 2 cu. yd.; bucket reach, 50 $\frac{3}{4}$ in. (or 7 ft. dump height); over-all width (bucket), 93 $\frac{1}{2}$ in.; wheelbase, 88 in.; speeds, forward (4), 0-24 MPH;... reverse (4), 0-30 MPH; shipping weight, with diesel engine, 20,780 lb. - with gasoline engine, 20,440 lb.

HIGH LIFT, extra-long reach and safety! Note how bucket lift arms are completely in front of operator's area. This gives him new freedom of movement and greater all-round visibility. Other safety features: wide steps for safe and easy access from either side. Plus wide fenders that provide a handy engine checking platform as well as protection for operator from rocks and mud.

NOW! The No. 944

...the Cat wheel-type Traxcavator

...the first of a New Wheel Loader Line



DESIGNED FOR ACTION, controls provide instant, finger-tip shifting... a full range of work and travel speeds with reverse speeds 25% faster than forward speeds. Travel Range gives 2-wheel drive for roading... Work Range automatically puts power to all 4 wheels. Other action features: conveniently located machine and bucket controls... forward-reverse lever on the steering column... both bucket control levers with kick-out devices. Lift control releases at dumping height - tilt control positions bucket for digging.



DESIGNED FOR PRECISE CONTROL, the No. 944 brake system is outstanding. The left brake neutralizes the transmission as it stops the machine to provide superior loading action. The right brake leaves the transmission engaged for full control when creeping, etc.



VERSATILE IS THE WORD for the Cat No. 944 Traxcavator, which is offered with a full line of attachments and accessories to multiply its usefulness to you on any job. Available are forks, cab (shown here) and special buckets, including the exclusive side dump bucket.

Here's the first of a completely new line of equipment... the Cat No. 944... rated at 2 cu. yd. capacity... that will soon include the No. 922 (1 $\frac{1}{4}$ cu. yd. bucket) and the No. 966 (2 $\frac{3}{4}$ cu. yd. bucket).

Watch for these new machines with the bold new design... they're ready to bring new standards to wheel loader operation. Take a look at the big new features that make this the easiest and fastest wheel loader to operate. Every feature is designed for *efficient work*. Plenty of horsepower... finger-tip steering... smooth, fast bucket action... outstanding operator comfort and safety.

Choose from two great new engines... the compact 4-cylinder Cat D330 Diesel Engine, turbocharged for maximum efficiency... or the 6-cylinder gasoline engine. Both are 105* HP units. Whatever your requirements, there's

a No. 944 powered to meet your needs. Get the complete facts on the No. 944. See your Caterpillar Dealer the week of March 11. See for yourself how the new design pays off on your loader jobs!

Caterpillar Tractor Co., General Offices, Peoria, Ill., U. S. A.

*For comparative purposes, the maximum rating of the Caterpillar D330 Diesel Engine used in the No. 944 is 135 horsepower.

CATERPILLAR

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**A GREAT
NEW PRODUCT IN THE
CATERPILLAR TRADITION**

